Major sources used in the compilation of IBCAO Ver. 4.0. Published peer-review articles and cruise reports linked to the data sources are listed where available in our metadata records. Bathymetric data that have been contributed without metadata are not listed, although used in the compilation where no other data are available.

| | |
|---|---|
| Alaska Fisheries Science Center of the US National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NOAA Alaskan Fisheries) | **Bathymetry data from the Alaska bathymetry compilations for the Aleutian Islands, central and western Gulf of Alaska and Norton Sound:**<br>https://www.afsc.noaa.gov/RACE/groundfish/Bathymetry/default.htm<br><br>**Digitized chart soundings, Alaska:**<br>Proofed digitized historical chart soundings from "smooth sheets" covering Alaskan waters [*Prescott and Zimmermann*, 2015; *M. Zimmermann and Prescott*, 2014; *Mark Zimmermann et al.*, 2019; *M. Zimmermann et al.*, 2013]<br><br>Zimmermann, M., M. M. Prescott, and P. J. Haeussler (2019), Bathymetry and Geomorphology of Shelikof Strait and the Western Gulf of Alaska, Geosciences, 9(10), 409, doi:10.3390/geosciences9100409.<br><br>Prescott, M. M., and M. Zimmermann (2015), Smooth sheet bathymetry of Norton Sound. Memo. NMFS-AFSC-298, 23 pp, U.S. Department of Commerce. doi:https://doi.org/10.7289/V5V69GJ9.<br><br>Zimmermann, M., and M. M. Prescott (2014), Smooth sheet bathymetry of Cook Inlet, Alaska. Memo. NMFS-AFSC-275, 32 pp, U.S. Department of Commerce.<br><br>Zimmermann, M., M. M. Prescott, and C. N. Rooper. 2013. Smooth sheet bathymetry of the Aleutian Islands. Memo. NMFS-AFSC-250, 43 pp, U.S. Department of Commerce. |
| Alfred Wegener Institute (AWI) | **81 Cruises of Multibeam data in the Atlantic and Indian Ocean region.**<br>**11 Cruises of multibeam data in the South and West Pacific:**<br><br>https://www.pangaea.de/<br>https://www.pangaea.de/expeditions/cr.php/Polarstern<br>https://webapp-srv1a.awi.de/eBathy/datasets2.php |

| | |
|---|---|
| Barcelona University (UB), Department of Stratigraphy, Paleontology and Marine Geosciences;<br>Istituto Nazionale di Ocenaografia e di Geofisica Sperimentale (OGS), Infrastructures Division | **Multibeam bathymetry from EGLACOM cruise with RV OGS-Explora in 2008 to the western Barents Sea margin:**<br>[*Rebesco et al.*, 2011]<br><br>Rebesco, M., et al. (2011), Deglaciation of the western margin of the Barents Sea Ice Sheet - A swath bathymetric and sub-bottom seismic study from the Kveithola Trough, Marine Geology, 279(1-4), 141-147. doi**:** 10.1016/j.margeo.2010.10.018<br><br>**Multibeam bathymetry from SVAIS cruise with RV Hesperides 2007 to the western Barents Sea margin:**<br>[*Pedrosa et al.*, 2011]<br><br>Pedrosa, M. T., A. Camerlenghi, B. De Mol, R. Urgeles, M. Rebesco, and R. G. Lucchi (2011), Seabed morphology and shallow sedimentary structure of the Storfjorden and Kveithola trough-mouth fans (North West Barents Sea), Marine Geology, 286(1–4), 65-81, doi:10.1016/j.margeo.2011.05.009. |
| British Antarctic Survey (BAS), UK NERC Polar Data Centre | **Multibeam data from three cruises of the RRS James Clark Ross:**<br><br>https://www.bas.ac.uk/<br><br>**JR51, 2000, Greenland and Norwegian Seas:**<br>[*J.A. Dowdeswell et al.*, 2010; *Hogan et al.*, 2010]<br><br>J. A. Dowdeswell, C. Ó Cofaigh, J. Taylor, N. H. Kenyon, J. Mienert and M. Wilken Geological Society, London, Special Publications, 203, 33-54, 1 January 2002, https://doi.org/10.1144/GSL.SP.2002.203.01.03<br><br>**JR142, 2006, Svalbard:**<br>[*J.A. Dowdeswell et al.*, 2010; *Hogan et al.*, 2010]<br><br>Dowdeswell, J. A., K. A. Hogan, J. Evans, R. Noormets, C. Ó Cofaigh, and D. Ottesen (2010), Past ice-sheet flow east of Svalbard inferred from streamlined subglacial landforms, Geology, 38(2), 163-166, doi:10.1130/g30621.1. |

| | |
|---|---|
| | Hogan, K. A., J. A. Dowdeswell, R. Noormets, J. Evans, C. Ó Cofaigh, and M. Jakobsson (2010), Submarine landforms and ice-sheet flow in the Kvitøya Trough, northwestern Barents Sea Quaternary Science Reviews, 29(25-26), 3545-3562, doi:10.1016/j.quascirev.2010.08.015.<br><br>**JR175, 2009, West Greenland:**<br>[*J. A. Dowdeswell et al.*, 2014]<br><br>Dowdeswell, J. A., K. A. Hogan, C. Ó Cofaigh, E. M. G. Fugelli, J. Evans, and R. Noormets (2014), Late Quaternary ice flow in a West Greenland fjord and cross-shelf trough system: submarine landforms from Rink Isbrae to Uummannaq shelf and slope, Quaternary Science Reviews, 92, doi:10.1016/j.quascirev.2013.09.007.<br><br>**JR211, 2008, Svalbard:**<br>[*Westbrook et al.*, 2009]<br><br>Westbrook, G. K., et al. (2009), Escape of methane gas from the seabed along the West Spitsbergen continental margin, Geophys. Res. Lett., 36(15), L15608, doi:10.1029/2009gl039191. |
| Canadian Hydrographic Service (CHS) | **Non-Navigational (NONNA-100) Bathymetric Data** (gridded compilation)**:** All currently validated, digital bathymetric sources acquired by CHS, combined at a resolution of approximately 100 meters. Contains information licensed under the Open Government Licence – Canada.<br><br>https://open.canada.ca/data/en/dataset/d3881c4c-650d-4070-bf9b-1e00aabf0a1d |
| Capricorn Greenland Exploration A/S | **Single beam bathymetry from two surveys in 2008 and 2009:**<br><br>No publications available |
| ConocoPhillips | **Single beam navigation data from Baffin Bay seismic surveys:**<br><br>No publications available<br><br>Navigation data from 2D-seismic surveys for exploration of hydrocarbons in Baffin Bay, West Greenland, in 2012, conducted by Polarcus DMCC for ConocoPhillips. Released to |

| | |
|---|---|
| | and provided through Greenland Institute of Natural Resources for the purpose of preparation for publication in IBCAO/GEBCO. |
| Digitized depth contours from bathymetric maps | **Contours digitized from six published maps are used in the IBCAO Ver. 4 compilation where no other data are available:**<br>[*Cherkis et al.*, 1991; *Matishov et al.*, 1995; *Naryshkin*, 1999; 2001; *Perry et al.*, 1986]<br><br>Cherkis, N. Z., H. S. Fleming, M. D. Max, P. R. Vogt, M. F. Czarnecki, Y. Kristoffersen, A. Midthassel, and K. Rokoengen (1991), Bathymetry of the Barents and Kara Seas, Bathymetry of the Barents and Kara Seas, Geological Society of America Map, Boulder. Scale 1:2,313,000<br><br>Matishov, G. G., N. Z. Cherkis, M. S. Vermillion, and S. L. Forman (1995), Bathymetry of the Franz Josef Land Area, Bathymetry of the Franz Josef Land area, Geological Society of America, Boulder, Colorado. Scale 1:500,000<br><br>Naryshkin, G. (1999), Bottom relief of the Arctic Ocean, Bathymetric contour map, Russian Academy of Sciences, St Petersburg. Scale 1:5,000,000<br>Naryshkin, G. (2001), Bottom relief of the Arctic Ocean, Bathymetric contour map, Russian Academy of Sciences. Scale 1:2,500,000<br><br>Perry, R. K., H. S. Fleming, J. R. Weber, Y. Kristoffersen, J. K. Hall, A. Grantz, G. L. Johnson, N. Z. Cherkis, and B. Larsen (1986), Bathymetry of the Arctic Ocean, Bathymetry of the Arctic Ocean, Boulder, Colorado. Scale 1:4,704,075 |
| EMODnet (gridded compilation) | **The EMODnet Digital Bathymetry (DTM) 2018:**<br>A multilayer bathymetric product for Europe's sea basins, based upon more than 9400 bathymetric survey data sets and Composite DTMs gathered from 49 data providers from 24 countries.<br>[*EMODnet Bathymetry Consortium*, 2018]<br><br>EMODnet Bathymetry Consortium (2018), EMODnet Digital Bathymetry (DTM), edited by E. B. Consortium, European Marine Observation and Data Network, doi:http://doi.org/10.12770/18ff0d48-b203-4a65-94a9-5fd8b0ec35f6. |
| Geological Institute, Russian Academy of Sciences (GIN RAS) | **Multibeam data from four surveys with RV Akademik Nikolaj Strakhov of the Knipovich Ridge** (Updated since IBCAO v3 with higher resolution): |

| | |
|---|---|
| | [*Zayonchek et al.*, 2010]<br><br>Zayonchek, A. V., et al. (2010), The Structure of Continent-Ocean transition zone at North-West Barents Sea Margin (results of 24–26th cruises of RV Akademik Nikolaj Strakhov, 2006-2009), in Contribution of Russia to International Polar Year, edited by M. Paulsen, pp. 111-157.<br><br>http://atlantic.ginras.ru/download/exp/grd/grd_data.html |
| Geological Survey of Canada (GSC), Canadian Hydrographic Service (CHS) | **Multibeam and single beam bathymetry from CCGS Louis St-Laurent:**<br><br>***Single beam***<br>**LSL2007:**<br>[*Jackson*, 2008]<br><br>Jackson, H. R. (2008), Field report for 2007 the CCGS Louis S. St-Laurent seismic cruise to the Canada Basin, Geological Survey of Canada, Open File 5818, 143 pp. doi: 10.4095/297589<br><br>**LSL2008:**<br>[*Jackson and DesRoches*, 2010]<br><br>Jackson, H. R., and DesRoches, K. J. (2010), 2008 Louis S. St-Laurent Field Report, August 22 – October 3, 2008, Geological Survey of Canada, Open File 6275, 184 pp. doi:10.4095/285359.<br><br>**LSL2009:**<br>[*Mosher et al.*, 2009]<br><br>Mosher, D.C., Shimeld, J.D., and Hutchinson, D.R. (2009), 2009 Canada Basin seismic reflection and refraction survey, western Arctic Ocean: CCGS Louis S. St-Laurent expedition report, Geological Survey of Canada, Open File 6343, 266 pp.<br><br>**LSL2010:**<br>[*Mosher et al.*, 2011] |

| | |
|---|---|
| | Mosher, D.C., Shimeld, J., and Champman, B.C., (2011), 2010 Canada Basin seismic reflection and refraction survey, western Arctic Ocean: CCGS Louis S. St-Laurent expedition report, Open File 6720, 240 pp.<br><br>**LSSL2011:**<br>[*Mosher*, 2012]<br><br>Mosher, D. C. (2012), 2011 Canadian High Arctic Seismic Expedition: CCGS Louis S. St-Laurent expedition report, Geological Survey of Canada, Open File 7053, 290 pp., doi: 10.4095/290241.<br><br>***Multibeam***<br>**LSSL2014:**<br>[*Travaglini*, 2014]<br><br>Travaglini, P. (2014), Final Field Report: Arctic Survey - UNCLOS 2014, CHSDIR Project Number 4013666, Dartmouth, Canadian Hydrographic Service, 82 pp.<br><br>**LSSL2015:**<br>[*Youngblut*, 2015][*Youngblut*, 2015]<br><br>Youngblut, S. (2015), Final Field Report: Amundsen Basin Survey: UNCLOS 2015, CHSDIR Project Number 4013733, Dartmouth: Canadian Hydrographic Service, 37 pp.<br><br>**LSSL2016:**<br>[*Gårdfeldt and Lindgren*, 2017]<br><br>Gårdfeldt, K., and Å. Lindgren (2017), SWEDARCTIC Arctic Ocean 2016: Expedition ReportRep., 1-117 pp, Stockholm: Swedish Polar Research Secretariat. |
| Geological Survey of Denmark and Greenland (GEUS) | **Single beam data acquired during seismic exploration surveys of the Greenland continental margin provided by GEUS:**<br><br>This contribution consists of >30 surveys carried out by various exploration companies for which the moratorium of the single beam bathymetry has expired. |

| | |
|---|---|
| | https://eng.geus.dk/ |
| Geological Survey of Denmark and Greenland (GEUS), Danish Geodata Agency | **Multibeam bathymetry collected by Fugro for Demark's extended continental shelf claim:**<br><br>No publication available |
| Geological Survey of Denmark and Greenland (GEUS), Stockholm University and Swedish Polar Research Secretariat | **Multibeam bathymetry from Swedish icebreaker Oden acquired during the Lomonosov Ridge off Greenland (LOMROG) Expeditions 2007-2012 and East Greenland Ridge Expeditions (EAGER) 2011:**<br><br>**LOMROG, 2007, Central Arctic Ocean:**<br>[*Jakobsson et al.*, 2008; *Jakobsson et al.*, 2010]<br><br>Jakobsson, M., Marcussen, C., and LOMROG, S. P., 2008, Lomonosov Ridge Off Greenland 2007 (LOMROG) - Cruise Report: Geological Survey of Denmark and Greenland. 122 pp.<br><br>Jakobsson, M., et al. (2010), An Arctic Ocean ice shelf during MIS 6 constrained by new geophysical and geological data, Quaternary Science Reviews, 29(25–26), 3505-3517, doi:http://dx.doi.org/10.1016/j.quascirev.2010.03.015.<br><br>**LOMROG 2009, Central Arctic Ocean:**<br>[*Marcussen and LOMROG II Scientific Party*, 2011]<br><br>Marcussen, C., and LOMROG II Scientific Party (2011), Lomonosov Ridge Off Greenland 2009 (LOMROG II) - Cruise ReportRep., 151 pp, Geological Survey of Denmark and Greenland, Ministry of Climate and Energy.<br><br>**LOMROG 2012, Central Arctic Ocean:**<br>[*Marcussen and LOMROG III Scientific Party*, 2012; *Marcussen et al.*, 2015]<br><br>Marcussen, C., F. Mørk, T. Funck, W. L. Weng, and M. Pedersen (2015), The continental shelf project of the kingdom of Denmark – Status and issues, in Geological Survey of Denmark and Greenland Bulletin, edited, pp. 41-44. |

| | |
|---|---|
| | Marcussen, C., and LOMROG III Scientific Party (2012), Lomonosov Ridge Off Greenland 2012 (LOMROG III) - Cruise ReportRep., 220 pp, Geological Survey of Denmark and Greenland, Geological Survey of Denmark and Greenland, Ministry of Climate and Energy.<br><br>**EAGER 2011, East Greenland Ridge:**<br>[*Marcussen and EAGER 2011 Scientific Party*, 2011]<br><br>Marcussen, C., and EAGER 2011 Scientific Party (2011), East Greenland Ridge 2011 (EAGER) - Cruise ReportRep., 1-86 pp, Geological Survey of Denmark and Greenland, Ministry of Climate and Energy, Copenhagen. |
| Geological Survey of Sweden (SGU) | **Hoburg's shoal survey from 2016/2017:**<br>[*Kågesten et al.*, 2019]<br><br>Kågesten, G., Fiorentino, D., Baumgartner, F., and Zillén, L., 2019, How Do Continuous High-Resolution Models of Patchy Seabed Habitats Enhance Classification Schemes?: Geosciences, v. 9, no. 5, p. 237. doi.org/10.3390/geosciences9050237<br><br>https://www.sgu.se/samhallsplanering/hav-och-kust/stod-till-havsplanering-och-forvaltning/projekt-hoburgs-bank/ |
| GEOMAR Helmholtz Centre for Ocean Research Kiel | **Multibeam data from RV Maria S. Merian:**<br><br>**05/03, 2007, Ilulissat Ice Fjord:**<br>[*Schumann et al.*, 2012]<br><br>Schumann, K., D. Völker, and W. R. Weinrebe (2012), Acoustic mapping of the Ilulissat Ice Fjord mouth, West Greenland, Quaternary Science Reviews, 40(0), 78-88.<br><br>https://www.geomar.de/en/centre/ |
| Global Multi-resolution Topography Data Synthesis (GMRT) | **GMRT version 3.5:**<br>A multi-resolutional compilation of edited multibeam sonar data collected by scientists and institutions worldwide, that is reviewed, processed and gridded by the MGDS Team and merged into a single continuously updated compilation of global elevation data, provided at 15 arc sec resolution to GEBCO.<br><br>https://www.gmrt.org/ |

| | |
|---|---|
| Greenland Institute of Natural Resources (GINR) | **Crowd source data and multibeam data provided through Greenland Institute of Natural Resources**:<br>These data include single beam soundings collected by GINR vessels Martek Aps, Kisaq, Greenland Police and Polar Seafood and multibeam bathymetry collected by Sanna in Nuup Kangerlua (Godthaabsfjord), Ameralik and Fyllas Bank of West Greenland in 2018.<br><br>https://natur.gl/ |
| IceBridge BedMachine Greenland | **IceBridge BedMachine Greenland, Version 3**:<br>Greenland under-ice topography/bathymetry gridded compilation. Gridded resolution is 150x150 m on a Polar Stereographic projection.<br>[*Morlighem et al.*, 2017]<br><br>Morlighem, M., et al. (2017), BedMachine v3: Complete Bed Topography and Ocean Bathymetry Mapping of Greenland From Multibeam Echo Sounding Combined With Mass Conservation, Geophysical Research Letters, 44(21), 11,051-011,061, doi:10.1002/2017GL074954.<br><br>http://nsidc.org/data/IDBMG4 |
| International Hydrographic Organization Data Center for Digital Bathymetry (IHO DCDB) | **Bathymetric Soundings extracted from the data maintained by the International Hydrographic Organization (IHO) Data Center for Digital Bathymetry (DCDB) at the US National Centers for Environmental Information (NCEI):**<br><br>https://www.ngdc.noaa.gov/iho/ |
| Japan Agency for Marine-Earth Science and Technology (JAMSTEC) | **Multibeam bathymetry collected with Japanese RV Mirai extracted from Data and Sample Research System for Whole Cruise Information in JAMSTEC:**<br><br>**MR00_K06:**<br>http://www.godac.jamstec.go.jp/darwin/cruise/mirai/MR00-K06/e<br>**MR02_K05:**<br>http://www.godac.jamstec.go.jp/darwin/publication/mirai/mr02-k05/e<br>**MR04_K05:**<br>No publication available<br>**MR99_K05:**<br>http://www.godac.jamstec.go.jp/darwin/cruise/mirai/mr99-k05_leg1/e<br><br>http://www.godac.jamstec.go.jp/darwin/e |

| | |
|---|---|
| Korean Polar Research Institute (KOPRI) | **Multibeam data from Korean RV Araon expeditions:**<br><br>**ARA02B and ARA03B:**<br>[*Kang et al.*, 2012]<br><br>Kang, S.-H., S.-i. Nam, J. H. Yim, K. H. Chung, and J. K. Hong (2012), Cruise Report: RV Araon ARA03BRep., 174 pp, Korea Polar Research Institute (KOPRI).<br><br>**ARA04C:**<br>No publication available<br><br>https://eng.kopri.re.kr |
| Maersk | **Single beam navigation data from Baffin Bay seismic surveys:**<br>No publication available<br><br>Navigation data from 2D-seismic surveys for exploration of hydrocarbons in Baffin Bay, West Greenland, in 2012, conducted by Polarcus DMCC for Maersk Oil. Released to Greenland Institute of Natural Resources for the purpose of preparation for publication in IBCAO/GEBCO. |
| MAREANO; Norwegian Hydrographic Service (NHS) | **Bathymetric model of the Norwegian continental shelf compiled by the MAREANO project:**<br><br>This gridded bathymetric model (incorporated at a resolution of 50x50 m) has been produced by using high quality hydrographic survey data, primarily multibeam. In ocean areas, the coverage is largely dependent on the surveys organized by the MAREANO program (www.mareano.no/en). The coverage area is extended continuously and the data is updated whenever new hydrographic surveys are finished being processed.<br><br>https://kartkatalog.geonorge.no/metadata/67a3a191-49cc-45bc-baf0-eaaf7c513549 |
| Nansen Environmental and Remote Sensing Center | **Single beam from RH SABVABAA (Hoovercraft) drifts in the central Arctic Ocean:**<br><br>**Drifts in 2011 and in 2014/2015:**<br>[*Kristoffersen and Hall*, 2014] |

| | |
|---|---|
| | Kristoffersen, Y., and J. K. Hall (2014), Hovercraft as a Mobile Science Platform Over Sea Ice in the Arctic Ocean, Oceanography, 27(2), 170-179, doi:10.5670/oceanog.2014.33. |
| NASA-Ocean Melting Greenland project, Caltech's Jet Propulsion Laboratory and the University of California Irvine | **Multibeam bathymetry acquired by the Ocean Melting Greenland Project (OMG) 2013-2018 along the coast of Greenland from airborne marine gravity and ship-based observations:**<br>[*An et al.*, 2019a; *An et al.*, 2017; *An et al.*, 2019b; *An et al.*, 2018; *Fenty et al.*, 2016; *Millan et al.*, 2018; *Eric Rignot et al.*, 2015; *E. Rignot et al.*, 2016a; *E. Rignot et al.*, 2016b; *Wood et al.*, 2018]<br><br>An, L., Rignot, E., Millan, R., Tinto, K., & Willis, J. (2019a). Bathymetry of Northwest Greenland using "Ocean Melting Greenland" (OMG) high-resolution airborne gravity and other data. Remote Sensing, 11(2), 131.<br><br>An, L., Rignot, E., Mouginot, J., & Millan, R. (2018). A century of stability of Avannarleq and Kujalleq Glaciers, West Greenland, explained using high-resolution airborne gravity and other data. Geophysical Research Letters, 45, 3156–3163. doi: 10.1002/2018GL077204<br><br>An, L., Rignot, E., Chauche, N., Holland, D., Holland, D., Jakobsson, M. et al. (2019b). Bathymetry of southeast Greenland from oceans melting Greenland (OMG) data. Geophysical Research Letters, 46, 11,197–11,205. doi: 10.1029/2019GL083953<br><br>An, L., E. Rignot, S. Elieff, M. Morlighem, R. Millan, J. Mouginot, D. M. Holland, D. Holland, and J. Paden (2017), Bed elevation of Jakobshavn Isbræ, West Greenland, from high-resolution airborne gravity and other data, Geophysical Research Letters, 44, doi:10.1002/2017GL073245.<br><br>Fenty, I., et al. (2016), Oceans Melting Greenland: Early Results from NASA's Ocean-Ice Mission in Greenland, Oceanography, 29(4), 71-83, doi:10.5670/oceanog.2016.100.<br><br>Millan, R., Rignot, E., Mouginot, J., Wood, M., Bjørk, A. A., & Morlighem, M. (2018). Vulnerability of southeast Greenland glaciers to warm Atlantic water from operation IceBridge and ocean melting Greenland data. Geophysical Research Letters, 45, 2688–2696. doi: 10.1002/2017GL076561. |

| | |
|---|---|
| | Rignot, E., Xu, Y., Menemenlis, D., Mouginot, J., Scheuchl, B., Li, X., et al. (2016a). Modeling of ocean-induced ice melt rates of five west Greenland glaciers over the past two decades. Geophysical Research Letters, 43, 6374–6382. doi: 10.1002/2016GL068784.<br><br>Rignot, E., I. Fenty, Y. Xu, C. Cai, I. Velicogna, C. Ó. Cofaigh, J. A. Dowdeswell, W. Weinrebe, G. Catania, and D. Duncan (2016b), Bathymetry data reveal glaciers vulnerable to ice-ocean interaction in Uummannaq and Vaigat glacial fjords, west Greenland, Geophysical Research Letters, 43(6), 2667-2674, doi:10.1002/2016GL067832.<br><br>Rignot, E., I. Fenty, Y. Xu, C. Cai, and C. Kemp (2015), Undercutting of marine-terminating glaciers in West Greenland, Geophys. Res. Lett., 42, doi:10.1002/2015GL064236.<br><br>Wood, M., Rignot, E., Fenty, I., Menemenlis, D., Millan, R., Morlighem, M., et al. (2018). Ocean-induced melt triggers glacier retreat in Northwest Greenland. Geophysical Research Letters, 45, 8334–8342. doi: 10.1029/2018GL078024<br><br>https://omg.jpl.nasa.gov/portal/ |
| National Geospatial-Intelligence Agency (NGA) | **Single beam data from Melville Bay, Greenland, contributed by NGA:**<br><br>No metadata included on contribution |
| Lamont-Doherty Earth Observatory, Columbia University, Earth Institute (R/V Marcus G. Langeth expeditions) | **Multibeam bathymetry from R/V Marcus G. Langseth:**<br><br>**MGL 1112, 2011, Chukchi Sea:**<br>[*Coakley et al.*, 2011; *Dove et al.*, 2014]<br><br>Coakley, B., and Ilhan (2011), Abstract T33A-2365: Chukchi Edges Project – Geophysical constraints on the history of the Amerasia Basin, paper presented at American Geophysical Union Fall Meeting 2011, American Geophysical Union, San Francisco, 5-9 Dec.<br><br>Dove, D., Polyak, L., and B. Coakley (2014), Widespread, multi-source glacial erosion on the Chukchi margin, Arctic Ocean, *Quaternary Science Reviews*, 92, 112–122, doi: 10.1016/j.quascirev.2013.07.016.<br><br>**MGL 1109, 2011, Gulf of Alaska:**<br>[*Reece et al.*, 2013] |

| | |
|---|---|
| | Reece, R. S., Gulick, S. P. S., Christeson, G. L., Horton, B. K., van Avendonk, H., and Barth, G. (2013), The role of farfield tectonic stress in oceanic intraplate deformation, Gulf of Alaska, *J. Geophys. Res. Solid Earth*, 118, 1862–1872, doi:10.1002/jgrb.50177. |
| Northeast Greenland Digital Bathymetric Model | **Digital bathymetric model of Northeast Greenland (gridded compilation):**<br>[*Arndt et al.*, 2015]<br><br>Arndt, J. E., W. Jokat, B. Dorschel, R. Myklebust, J. A. Dowdeswell, and J. Evans (2015), A new bathymetry of the Northeast Greenland continental shelf: Constraints on glacial and other processes, Geochemistry, Geophysics, Geosystems, 16(10), 3733-3753, doi:10.1002/2015GC005931. |
| Norwegian Hydrographic Service (NHS) | **Svalbard bathymetry grid based on multibeam bathymetry:**<br><br>Released in 2016, this dataset includes modern multibeam data from surveys up until autumn 2015. Data is originally at 10x10 m, but down sampled to 100x100 m during the incorporation.<br><br>https://www.kartverket.no/ |
| The Norwegian Petroleum Directorate (NPD) | **Multibeam bathymetry collected on behalf of the Norwegian Petroleum Directorate:**<br><br>The multibeam mapping was carried out by Gardline Ltd. https://www.gardline.com/ |
| Norwegian Polar Institute (NPI) | **Svalbard topography grid:**<br><br>New topographical data of Svalbard with updated glacial fronts from satellite imaging.<br>https://toposvalbard.npolar.no/<br>http://www.npolar.no/no/ |
| Olex AS, Norway | **Crowd source bathymetry provided by Olex:**<br>These data are primarily single beam soundings collected by fishing vessels using the Olex acquisition system. The data are provided gridded at a resolution of 400x400 m.<br><br>www.olex.no |
| Shell | **Single beam navigation data from Baffin Bay seismic surveys:**<br>No publication available |

| | |
|---|---|
| | Navigation data from 2D-seismic surveys for exploration of hydrocarbons in Baffin Bay, West Greenland, in 2012, conducted by Polarcus DMCC for Royal Dutch Shell. Released to Greenland Institute of Natural Resources for the purpose of preparation for publication in IBCAO/GEBCO. |
| Swedish Polar Research Secretariat and Stockholm University | **Multibeam and single beam data from expeditions with Swedish icebreaker Oden:** The LOMROG and EAGER expeditions are listed separately above.<br><br>***Single beam***<br>**Arctic Ocean 1991, 1996, 2001:**<br>[*Anderson et al.*, 1994; *Björk et al.*, 2002; *Jakobsson*, 1999]<br><br>Anderson, L. G., G. Björk, O. Holby, E. P. Jones, G. Kattner, K. P. Koltermann, B. Liljeblad, R. Lindegren, B. Rudels, and J. Swift (1994), Water masses and circulation in the Eurasian Basin: Results from Oden 91 Expedition, Journal of Geophysical Research, 99(C2), 3273-3283.<br><br>Björk, G., J. Söderkvist, P. Winsor, A. Nikolopoulos, and M. Steele (2002), Return of the cold halocline layer to the Amundsen Basin of the Arctic Ocean: Implications for the sea ice mass balance, Geophysical Research Letters, 29(11), 8-1-8-4, doi:10.1029/2001gl014157.<br><br>Jakobsson, M. (1999), First high-resolution chirp sonar profiles from the central Arctic Ocean reveal erosion of Lomonsov Ridge sediments, Marine Geology, 158, 111-123.<br><br>***Multibeam***<br>**AGAVE 2007:**<br>[*Sohn et al.*, 2008]<br><br>Sohn, R. A., et al. (2008), Explosive volcanism on the ultraslow-spreading Gakkel Ridge, Arctic Ocean, Nature, 453(26 June), 1236-1238, doi:10.1038/nature07075.<br><br>**NEGC 2008:**<br>Operated by Statoil A/S, no publication available |

| | |
|---|---|
| | **SAT 2008, 2009:**<br>[*Freire et al.*, 2014]<br><br>Freire, F., R. Gyllencreutz, R. Jafri, and M. Jakobsson (2014), Acoustic evidence of a submarine slide in the deepest part of the Arctic, the Molloy Hole, Geo-Marine Letters(34), 315-325, doi:10.1007/s00367-014-0371-5.<br><br>**SWERUS-C3 2014 Expedition:**<br>[*Jakobsson et al.*, 2016; *The SWERUS Scientific Party*, 2016a; b]<br><br>The SWERUS Scientific Party (2016), Cruise Report for SWERUS-C3 Leg 1Rep., 200 pp, Bolin Centre for Climate Research, Stockholm.<br><br>The SWERUS Scientific Party (2016), Cruise Report for SWERUS-C3 Leg 2Rep., 190 pp, Bolin Centre for Climate Research, Stockholm.<br><br>Jakobsson, M., et al. (2016), Evidence for an ice shelf covering the central Arctic Ocean during the penultimate glaciation, Nature Communication, 7, 1-10, doi:10.1038/ncomms10365.<br><br>**Petermann 2015 Expedition:**<br>[*Jakobsson et al.*, 2018; *Mix et al.*, 2015]<br><br>Jakobsson, M., et al. (2018), The Holocene retreat dynamics and stability of Petermann Glacier in northwest Greenland, Nature Communications, 9(1), 2104, doi:10.1038/s41467-018-04573-2.<br><br>Mix, A. C., M. Jakobsson, and Petermann-2015 Scientific Party (2015), Petermann-2015 Expedition Launches International Collaboration in Arctic Science, Witness the Arctic.<br><br>**Arctic Ocean 2016 Expedition:**<br>[*Gårdfeldt and Lindgren*, 2017]<br><br>Gårdfeldt, K., and Å. Lindgren (2017), SWEDARCTIC Arctic Ocean 2016: Expedition ReportRep., 1-117 pp, Stockholm: Swedish Polar Research Secretariat. |

| | |
|---|---|
| | **Ryder 2019 Expedition:**<br>[*Jakobsson et al.*, submitted]<br><br>Jakobsson, M., et al. (submitted), Seafloor and Atlantic water influence on Ryder Glacier, Northwestern Greenland, Science Advances.<br><br>Oden Mapping data: https://oden.geo.su.se/ |
| Stockholm University, University of New Hampshire and Ola Skinnarmo | **Multibeam bathymetry acquired in Melville Bay, west Greenland, during the VEGA-Greenland Expedition 2013, with SY Explorer of Sweden:**<br>[*Freire et al.*, 2015]<br><br>Freire, F., R. Gyllencreutz, S. L. Greenwood, L. Mayer, A. Egilsson, T. Thorsteinsson, and M. Jakobsson (2015), High resolution mapping of offshore and onshore glaciogenic features in metamorphic bedrock terrain, Melville Bay, northwestern Greenland, Geomorphology, 250, 29-40, doi: 10.1016/j.geomorph.2015.08.011. |
| TelePost Greenland A/S | **Greenland Connect Nord multibeam bathymetry from south-west Greenland:**<br>No publication available<br><br>Multibeam survey for offshore and inshore telecommunication cable from Nuuk to Aasiaat. Released to Greenland Institute of Natural Resources for the purpose of preparation for publication in IBCAO/GEBCO. |
| The University Centre in Svalbard (UNIS) | **Multibeam bathymetry from Svalbard, from seven cruises with RV Helmer Hanssen:**<br><br>**JM09H**<br>**JM10**:<br>[*Noormets et al.*, 2010]<br><br>Noormets, R., Dowdeswell, J.A., Jakobsson, M. and Ó Cofaigh, C., 2010. New evidence on past ice flow and iceberg activity on the southern Yermak Plateau. American Geophysical Union, Fall Meeting, 13-17 December 2010, San Francisco, USA.<br><br>**HH11:** |

| | |
|---|---|
| | [*Fransner et al.*, 2018a]<br>Fransner, O., Noormets, R., Chauhan, T., O'Regan, M.A. & Jakobsson, M., 2018. Late Weichselian ice stream configuration and dynamics in Albertini Trough, northern Svalbard margin. Arktos 4:1, 1-22.<br><br>**HH12:**<br>[*Fransner et al.*, 2017]<br>Fransner, O., Noormets, R., Flink, A.E. Hogan, K.A., Ó Regan, M.A. & Jakobsson, M., 2017. Glacial landforms and their implications for glacier dynamics in Rijpfjorden and Duvefjorden, northern Nordaustlandet, Svalbard. Journal of Quaternary Science 32, 437-455.<br><br>Flink, A.E., Noormets, R., Fransner, O., Hogan, K.A., ÓRegan, M. and Jakobsson, M., 2017. Past ice flow in Wahlenbergfjorden and its implications for late Quaternary ice sheet dynamics in northeastern Svalbard. Quaternary Science Reviews 163, 162-179.<br><br>**HH13-NAL**:<br>[*Fransner et al.*, 2018b]<br>Fransner, O., R. Noormets, A. E. Flink, K. A. Hogan, and J. A. Dowdeswell (2018), Sedimentary processes on the continental slope off Kvitøya and Albertini troughs north of Nordaustlandet, Svalbard – The importance of structural-geological setting in trough-mouth fan development, Marine Geology, 402, 194-208, doi:https://doi.org/10.1016/j.margeo.2017.10.008.<br><br>**HH13-SF**:<br>[*Lockwood*, 2016]<br>Lockwood, C. Reconstruction of ice stream retreat and palaeoceanographic development during the deglaciation and Holocene in the Storfjorden Trough, Svalbard. MSc Thesis in Marine geology and geophysics, University of Tromsø, 2016.<br><br>**HH14**<br>No publication available<br><br>https://www.unis.no/ |
| University of Alaska Fairbanks and its College of Fisheries and Ocean Sciences | **Alaska Region Digital Elevation Model (ARDEM) Version 2.0:**<br>[*Danielson et al.*, 2015] |

| | |
|---|---|
| | Danielson, S. L., E. L. Dobbins, M. Jakobsson, M. A. Johnson, T. J. Weingartner, W. J. Williams, and Y. Zarayskaya (2015), Sounding the northern seas, EOS 96, doi:10.1029/2015EO040975. |
| University of Bremen, MARUM - Center for Marine Environmental Sciences | **Multibeam data from western Svalbard region (Vestnesa Ridge) with MARUM RV Heincke:**<br>[*Mau et al.*, 2017]<br><br>Mau, S., Römer, M., Torres, M., Bussmann, I., Pape, T., Damm, E. Geprägs, P., Wintersteller, P., Hsu, C.-W., Loher, M., and G. Bohrmann (2017), Widespread methane seepage along the continental margin off Svalbard - from Bjørnøya to Kongsfjorden. *Scientific Reports* 7, 42997, doi: 10.1038/srep42997<br><br>**HE449:**<br>https://www.marum.de/en/Research/RV-HEINCKE-HE449-1-August-22-August-2015-Trondheim-Tromso.html<br><br>**HE450:**<br>https://www.marum.de/en/Research/RV-HEINCKE-HE450-25-August-8-September-2015-Tromso-Tromso.html<br><br>https://www.marum.de/en/index.html |
| University of New Brunswick, Ocean Mapping Group | **Multibeam bathymetry acquired with Canadian CCGS Amundsen:**<br><br>Multibeam data from expeditions between 2003-2011 and 2013 are provided through the Ocean Mapping Group at University of New Brunswick separately from the NONNA-100 compilation where they also are included.<br><br>http://www.omg.unb.ca/arctic-mapping/ |
| University of New Hampshire, Center for Coastal and Ocean Mapping/Joint Hydrographic Center | **Multibeam bathymetry from U.S. Law of the Sea cruise to map the foot of the slope and 2500-m isobath of the US Arctic Ocean margin carried Center for Coastal and Ocean Mapping/Joint Hydrographic Center, University of New Hampshire**:<br><br>https://ccom.unh.edu/theme/law-sea/arctic-ocean |

| | |
|---|---|
| | **HLY1603:**<br>[*Mayer et al.*, 2016]<br>Mayer, L. A., B. Calder, and D. Mosher (2016), U.S. Law of the Sea cruise to map the foot of the slope and 2500-m isobath of the US Arctic Ocean margin: CRUISE HEALY 1603Rep., 135 pp, Center for Coastal and Ocean Mapping/Joint Hydrographic Center University of New Hampshire, Durham, New Hampshire.<br><br>**HLY1202:**<br>[*Mayer and Armstrong*, 2012]<br>Mayer, L. A., and A. A. Armstrong (2012), U.S. Law of the Sea cruise to map the foot of the slope and 2500-m isobath of the US Arctic Ocean margin: CRUISE HEALY 1202Rep., 159 pp, Center for Coastal and Ocean Mapping/Joint Hydrographic Center University of New Hampshire, Durham, New Hampshire.<br><br>**HLY1102:**<br>[*Mayer*, 2011]<br>Mayer, L. A. (2011), U.S. Law of the Sea cruise to map the foot of the slope and 2500-m isobath of the US Arctic Ocean margin: CRUISE HEALY 1102 Rep., 235 pp, Center for Coastal and Ocean Mapping/Joint Hydrographic Center University of New Hampshire, Durham, New Hampshire.<br><br>**HLY0905:**<br>[*Mayer*, 2009]<br>Mayer, L. A. (2009), U.S. Law of the Sea cruise to map the foot of the slope and 2500-m isobath of the US Arctic Ocean margin: CRUISE HE-0905Rep., 118 pp, Center for Coastal and Ocean Mapping/Joint Hydrographic Center University of New Hampshire, Durham, New Hampshire.<br><br>**HLY0805:**<br>[*Mayer*, 2008]<br>Mayer, L. A. (2008), U.S. Law of the Sea cruise to map the foot of the slope and 2500-m isobath of the US Arctic Ocean margin: CRUISE HE-0805Rep., 179 pp, Center for Coastal and Ocean Mapping/Joint Hydrographic Center University of New Hampshire, Durham, New Hampshire. |

| | |
|---|---|
| | **HLY0703:**<br>[*Mayer and Armstrong*, 2007]<br>Mayer, L. A., and A. Armstrong (2007), U.S. Law of the Sea cruise to map the foot of the slope and 2500-m isobath of the US Arctic Ocean margin: CRUISE HE-0703Rep., 182 pp, Center for Coastal and Ocean Mapping/Joint Hydrographic Center University of New Hampshire, Durham, New Hampshire.<br><br>**HLY0302:**<br>[*Jakobsson et al.*, 2005; *Mayer*, 2004]<br>Mayer, L. A. (2004), U.S. Law of the Sea cruise to map the foot of the slope and 2500-m isobath of the US Arctic Ocean margin: CRUISES HE-0302Rep., 19 pp, Center for Coastal and Ocean Mapping/Joint Hydrographic Center University of New Hampshire, Durham, New Hampshire.<br><br>Jakobsson, M., J. V. Gardner, P. Vogt, L. A. Mayer, A. Armstrong, J. Backman, R. Brennan, B. Calder, J. K. Hall, and B. Kraft (2005), Multibeam bathymetric and sediment profiler evidence for ice grounding on the Chukchi Borderland, Arctic Ocean, Arctic Ocean, Quaternary Research, 63, 150-160, doi: 10.1016/j.yqres.2004.12.004.<br><br>**HLY0405:**<br>[*Mayer*, 2005]<br>Mayer, L. A. (2005), U.S. Law of the Sea cruise to map the foot of the slope and 2500-m isobath of the US Arctic Ocean margin: CRUISES HE-0405Rep., 47 pp, Center for Coastal and Ocean Mapping/Joint Hydrographic Center University of New Hampshire, Durham, New Hampshire.<br><br>**HLY0503:**<br>[*Darby et al.*, 2005]<br>Darby, D., M. Jakobsson, and L. Polyak (2005), Icebreaker Expedition Collects Key Arctic Sea Floor and Ice Data, EOS Transactions, American Geophysical Union, 86(52), 549-556.<br><br>Bathymetry are in addition provided from the following expeditions with USCGC Healy through the Center for Coastal and Ocean Mapping/Joint Hydrographic Center, or retrieved from the IHO-DCDB:<br>HLY0201, HLY0203, HLY0204, HLY0304, HLY0402, HLY0403, HLY0404, HLY0501, HLY0502, HLY0602, HLY0804, HLY0806, HLY0904, HLY1002 |

| | |
|---|---|
| United States Geological Survey (USGS); National Geospatial-Intelligence Agency (NGA) | **Global Multi-resolution Terrain Elevation Data 2010 (GMTED2010)**<br><br>https://www.usgs.gov/land-resources/eros/coastal-changes-and-impacts/gmted2010?qt-science_support_page_related_con=0#qt-science_support_page_related_con |
| US Navy | **Bathymetry from the Arctic region collected from US Navy nuclear submarines:**<br><br>***Single beam***<br>USS Topeka, 2012<br>USS New Hampshire, 2011<br>USS Connecticut, 2011<br><br>***Single beam released in batches with no connection to specific submarine***<br>1992-2000; 1985-1992; 1958-1985, 2001-2005<br><br>***Single beam from the SCICEX program 1993-1998, and swath bathymetry from 1999***<br>SCICEX-93; USS Pargo<br>SCICEX-95; USS Cavalla<br>SCICEX-96; USS Pogy<br>SCICEX-97; USS Archerfish<br>SCICEX-98; USS Hawkbill<br>SCICEX-99; USS Hawkbill (Swath bathymetry aquired with the SCAMP system, see main text)<br><br>[*Edwards and Coakley*, 2003; *Newton*, 2000]<br>Edwards, M. H., and B. J. Coakley (2003), SCICEX Investigations of the Arctic Ocean System, Chemie der Erde, 63(4), 281 - 328.<br><br>Newton, G. B. (2000), The Science Ice Exercise Program: History, achievement, and future of SCICEX., Arctic Research of the United States, 14(fall/winter), 2-7. |
| Woods Hole Oceanographic Institution (WHOI) | **Multibeam data from RV Knorr provided through WHOI Data Library and Archives:**<br><br>**KN166-14, 2002, North Atlantic:** |

| | |
|---|---|
| | No publication found<br><br>https://www.whoi.edu/ |

## References


An, L., et al. (2019a), Bathymetry of Southeast Greenland from Ocean Melting Greenland (OMG) data, *Geophysical Research Letters*, *0*(ja), doi:10.1029/2019gl083953.

An, L., E. Rignot, S. Elieff, M. Morlighem, R. Millan, J. Mouginot, D. M. Holland, D. Holland, and J. Paden (2017), Bed elevation of Jakobshavn Isbræ, West Greenland, from high-resolution airborne gravity and other data, *Geophysical Research Letters*, *44*(8), 3728-3736, doi:10.1002/2017gl073245.

An, L., E. Rignot, R. Millan, K. Tinto, and J. Willis (2019b), Bathymetry of Northwest Greenland Using "Ocean Melting Greenland" (OMG) High-Resolution Airborne Gravity and Other Data, *Remote Sensing*, *11*(2), 131.

An, L., E. Rignot, J. Mouginot, and R. Millan (2018), A Century of Stability of Avannarleq and Kujalleq Glaciers, West Greenland, Explained Using High-Resolution Airborne Gravity and Other Data, *Geophysical Research Letters*, *45*(7), 3156-3163, doi:10.1002/2018gl077204.

Anderson, L. G., G. Björk, O. Holby, E. P. Jones, G. Kattner, K. P. Koltermann, B. Liljeblad, R. Lindegren, B. Rudels, and J. Swift (1994), Water masses and circulation in the Eurasian Basin: Results from *Oden* 91 Expedition, *Journal of Geophysical Research*, *99*(C2), 3273-3283.

Arndt, J. E., W. Jokat, B. Dorschel, R. Myklebust, J. A. Dowdeswell, and J. Evans (2015), A new bathymetry of the Northeast Greenland continental shelf: Constraints on glacial and other processes, *Geochemistry, Geophysics, Geosystems*, *16*(10), 3733-3753, doi:10.1002/2015GC005931.

Björk, G., J. Söderkvist, P. Winsor, A. Nikolopoulos, and M. Steele (2002), Return of the cold halocline layer to the Amundsen Basin of the Arctic Ocean: Implications for the sea ice mass balance, *Geophysical Research Letters*, *29*(11), 8-1-8-4, doi:10.1029/2001gl014157.

Cherkis, N. Z., H. S. Fleming, M. D. Max, P. R. Vogt, M. F. Czarnecki, Y. Kristoffersen, A. Midthassel, and K. Rokoengen (1991), Bathymetry of the Barents and Kara Seas, *Bathymetry of the Barents and Kara Seas*, Geological Society of America Map, Boulder.

Coakley, B., I. Ilhan, and Chukchi Edges Science Party (2011), Chukchi Edges Project - Geophysical constraints on the history of the Amerasia Basin, in *American Geophysical Union Fall Meeting 2011*, edited, pp. Abstract T33A-2365, American Geophysical Union, San Fransisco, USA.

Danielson, S. L., E. L. Dobbins, M. Jakobsson, M. A. Johnson, T. J. Weingartner, W. J. Williams, and Y. Zarayskaya (2015), Sounding the northern seas, *EOS 96*, doi:10.1029/2015EO040975.

Darby, D., M. Jakobsson, and L. Polyak (2005), Icebreaker Expedition Collects Key Arctic Sea Floor and Ice Data, *EOS Transactions, American Geophysical Union*, *86*(52), 549-556.

Dove, D., L. Polyak, and B. Coakley (2014), Widespread, multi-source glacial erosion on the Chukchi margin, Arctic Ocean, *Quaternary Science Reviews*, *92*(0), 112-122, doi:http://dx.doi.org/10.1016/j.quascirev.2013.07.016.

Dowdeswell, J. A., K. A. Hogan, J. Evans, R. Noormets, C. Ó Cofaigh, and D. Ottesen (2010), Past ice-sheet flow east of Svalbard inferred from streamlined subglacial landforms, *Geology*, *38*(2), 163-166, doi:10.1130/g30621.1.

Dowdeswell, J. A., K. A. Hogan, C. Ó Cofaigh, E. M. G. Fugelli, J. Evans, and R. Noormets (2014), Late Quaternary ice flow in a West Greenland fjord and cross-shelf trough system: submarine landforms from Rink Isbrae to Uummannaq shelf and slope, *Quaternary Science Reviews*, *92*, doi:http://dx.doi.org/10.1016/j.quascirev.2013.09.007.

Edwards, M. H., and B. J. Coakley (2003), SCICEX Investigations of the Arctic Ocean System, *Chemie der Erde*, *63*(4), 281 - 328.

EMODnet Bathymetry Consortium (2018), EMODnet Digital Bathymetry (DTM), edited by E. B. Consortium, European Marine Observation and Data Network, doi:http://doi.org/10.12770/18ff0d48-b203-4a65-94a9-5fd8b0ec35f6.

Fenty , I., et al. (2016), Oceans Melting Greenland: Early Results from NASA's Ocean-Ice Mission in Greenland, *Oceanography*, *29*(4), 71-83, doi:https://doi.org/10.5670/oceanog.2016.100.

Fransner, O., R. Noormets, T. Chauhan, M. O'Regan, and M. Jakobsson (2018a), Late Weichselian ice stream configuration and dynamics in Albertini Trough, northern Svalbard margin, *arktos*, *4*(1), 1, doi:10.1007/s41063-017-0035-6.

Fransner, O., R. Noormets, A. E. Flink, K. A. Hogan, and J. A. Dowdeswell (2018b), Sedimentary processes on the continental slope off Kvitøya and Albertini troughs north of Nordaustlandet, Svalbard – The importance of structural-geological setting in trough-mouth fan development, *Marine Geology*, *402*, 194-208, doi:https://doi.org/10.1016/j.margeo.2017.10.008.

Fransner, O., R. Noormets, A. E. Flink, K. A. Hogan, M. O'Regan, and M. Jakobsson (2017), Glacial landforms and their implications for glacier dynamics in Rijpfjorden and Duvefjorden, northern Nordaustlandet, Svalbard, *Journal of Quaternary Science*, *32*(3), 437-455, doi:10.1002/jqs.2938.

Freire, F., R. Gyllencreutz, S. L. Greenwood, L. Mayer, A. Egilsson, T. Thorsteinsson, and M. Jakobsson (2015), High resolution mapping of offshore and onshore glaciogenic features in metamorphic bedrock terrain, Melville Bay, northwestern Greenland, *Geomorphology*, *250*, 29-40, doi:http://dx.doi.org/10.1016/j.geomorph.2015.08.011.

Freire, F., R. Gyllencreutz, R. Jafri, and M. Jakobsson (2014), Acoustic evidence of a submarine slide in the deepest part of the Arctic, the Molloy Hole, *Geo-Marine Letters*(34), 315-325, doi:10.1007/s00367-014-0371-5.

Gårdfeldt, K., and Å. Lindgren (2017), SWEDARCTIC Arctic Ocean 2016: Expedition Report*Rep.*, 1-117 pp, Stockholm: Swedish Polar Research Secretariat.

Hogan, K. A., J. A. Dowdeswell, R. Noormets, J. Evans, C. Ó Cofaigh, and M. Jakobsson (2010), Submarine landforms and ice-sheet flow in the Kvitøya Trough, northwestern Barents Sea *Quaternary Science Reviews*, *29*(25-26), 3545-3562, doi:10.1016/j.quascirev.2010.08.015.

Jackson, H. R. (2008), Field report for 2007 the CCGS Louis S. St-Laurent seismic cruise to the Canada Basin*Rep.*, 143 pp, Geological Survey of Canada, Natural Resources Canada, doi:10.4095/297589.

Jackson, H. R., and K. J. DesRoches (2010), 2008 Louis S. St-Laurent Field Report, August 22 – October 3, 2008*Rep.*, 184 pp, Geological Survey of Canada, Natural Resources Canada, doi:10.4095/297589.

Jakobsson, M. (1999), First high-resolution chirp sonar profiles from the central Arctic Ocean reveal erosion of Lomonsov Ridge sediments, *Marine Geology*, *158*, 111-123.

Jakobsson, M., J. V. Gardner, P. Vogt, L. A. Mayer, A. Armstrong, J. Backman, R. Brennan, B. Calder, J. K. Hall, and B. Kraft (2005), Multibeam bathymetric and sediment profiler evidence for ice grounding on the Chukchi Borderland, Arctic Ocean, Arctic Ocean,, *Quaternary Research*, *63*, 150-160, doi:doi:10.1016/j.yqres.2004.12.004.

Jakobsson, M., et al. (2018), The Holocene retreat dynamics and stability of Petermann Glacier in northwest Greenland, *Nature Communications*, *9*(1), 2104, doi:10.1038/s41467-018-04573-2.

Jakobsson , M., C. Marcussen, and S. P. LOMROG (2008), Lomonosov Ridge Off Greenland 2007 (LOMROG) - Cruise Report, *Cruise report Rep.*, 122 pp, Geological Survey of Denmark and Greenland, Copenhagen.

Jakobsson, M., et al. (submitted), Seafloor and Atlantic water influence on Ryder Glacier, Northwestern Greenland, *Science Advances*.

Jakobsson, M., et al. (2016), Evidence for an ice shelf covering the central Arctic Ocean during the penultimate glaciation, *Nature Communication*, *7*, 1-10, doi:10.1038/ncomms10365.

Jakobsson, M., et al. (2010), An Arctic Ocean ice shelf during MIS 6 constrained by new geophysical and geological data, *Quaternary Science Reviews*, *29*(25–26), 3505-3517, doi:http://dx.doi.org/10.1016/j.quascirev.2010.03.015.

Kågesten, G., D. Fiorentino, F. Baumgartner, and L. Zillén (2019), How Do Continuous High-Resolution Models of Patchy Seabed Habitats Enhance Classification Schemes?, *Geosciences*, *9*(5), 237.

Kang, S.-H., S.-i. Nam, J. H. Yim, K. H. Chung, and J. K. Hong (2012), Cruise Report: RV Araon ARA03B*Rep.*, 174 pp, Korea Polar Research Institute (KOPRI).

Kristoffersen, Y., and J. K. Hall (2014), Hovercraft as a Mobile Science Platform Over Sea Ice in the Arctic Ocean, *Oceanography*, *27*(2), 170-179, doi:10.5670/oceanog.2014.33.

Lockwood, C. (2016), Reconstruction of ice stream retreat and palaeoceanographic development during the deglaciation and Holocene in the Storfjorden Trough, Svalbard, 119 pp, UiT The Arctic University of Norway, University of Tromsø.

Marcussen, C., and EAGER 2011 Scientific Party (2011), East Greenland Ridge 2011 (EAGER) - Cruise Report*Rep.*, 1-86 pp, Geological Survey of Denmark and Greenland, Ministry of Climate and Energy, Copenhagen.

Marcussen, C., and LOMROG II Scientific Party (2011), Lomonosov Ridge Off Greenland 2009 (LOMROG II) - Cruise Report*Rep.*, 151 pp, Geological Survey of Denmark and Greenland, Ministry of Climate and Energy.

Marcussen, C., and LOMROG III Scientific Party (2012), Lomonosov Ridge Off Greenland 2012 (LOMROG III) - Cruise Report*Rep.*, 220 pp, Geological Survey of Denmark and Greenland, Geological Survey of Denmark and Greenland, Ministry of Climate and Energy.

Marcussen, C., F. Mørk, T. Funck, W. L. Weng, and M. Pedersen (2015), The continental shelf project of the kingdom of Denmark – Status and issues, in *Geological Survey of Denmark and Greenland Bulletin*, edited, pp. 41-44.

Matishov, G. G., N. Z. Cherkis, M. S. Vermillion, and S. L. Forman (1995), Bathymetry of the Franz Josef Land Area, *Bathymetry of the Franz Josef Land area*, Geological Society of America, Boulder, Colorado.

Mau, S., et al. (2017), Widespread methane seepage along the continental margin off Svalbard - from Bjørnøya to Kongsfjorden, *Scientific Reports*, *7*(1), 42997, doi:10.1038/srep42997.

Mayer, L. A. (2004), U.S. Law of the Sea cruise to map the foot of the slope and 2500-m isobath of the US Arctic Ocean margin: CRUISES HE-0302*Rep.*, 19 pp, Center for Coastal and Ocean Mapping/Joint Hydrographic Center University of New Hampshire, Durham, New Hampshire.

Mayer, L. A. (2005), U.S. Law of the Sea cruise to map the foot of the slope and 2500-m isobath of the US Arctic Ocean margin: CRUISES HE-0405*Rep.*, 47 pp, Center for Coastal and Ocean Mapping/Joint Hydrographic Center University of New Hampshire, Durham, New Hampshire.

Mayer, L. A. (2008), U.S. Law of the Sea cruise to map the foot of the slope and 2500-m isobath of the US Arctic Ocean margin: CRUISE HE-0805*Rep.*, 179 pp, Center for Coastal and Ocean Mapping/Joint Hydrographic Center University of New Hampshire, Durham, New Hampshire.

Mayer, L. A. (2009), U.S. Law of the Sea cruise to map the foot of the slope and 2500-m isobath of the US Arctic Ocean margin: CRUISE HE-0905*Rep.*, 118 pp, Center for Coastal and Ocean Mapping/Joint Hydrographic Center University of New Hampshire, Durham, New Hampshire.

Mayer, L. A. (2011), U.S. Law of the Sea cruise to map the foot of the slope and 2500-m isobath of the US Arctic Ocean margin: CRUISE HEALY 1102*Rep.*, 235 pp, Center for Coastal and Ocean Mapping/Joint Hydrographic Center University of New Hampshire, Durham, New Hampshire.

Mayer, L. A., and A. A. Armstrong (2007), U.S. Law of the Sea cruise to map the foot of the slope and 2500-m isobath of the US Arctic Ocean margin: CRUISE HE-0703*Rep.*, 182 pp, Center for Coastal and Ocean Mapping/Joint Hydrographic Center University of New Hampshire, Durham, New Hampshire.

Mayer, L. A., and A. A. Armstrong (2012), U.S. Law of the Sea cruise to map the foot of the slope and 2500-m isobath of the US Arctic Ocean margin: CRUISE HEALY 1202*Rep.*, 159 pp, Center for Coastal and Ocean Mapping/Joint Hydrographic Center University of New Hampshire, Durham, New Hampshire.

Mayer, L. A., B. Calder, and D. Mosher (2016), U.S. Law of the Sea cruise to map the foot of the slope and 2500-m isobath of the US Arctic Ocean margin: CRUISE HEALY 1603*Rep.*, 135 pp, Center for Coastal and Ocean Mapping/Joint Hydrographic Center University of New Hampshire, Durham, New Hampshire.

Millan, R., E. Rignot, J. Mouginot, M. Wood, A. A. Bjørk, and M. Morlighem (2018), Vulnerability of Southeast Greenland Glaciers to Warm Atlantic Water From Operation IceBridge and Ocean Melting Greenland Data, *Geophysical Research Letters*, *45*(6), 2688-2696, doi:10.1002/2017gl076561.

Mix, A. C., M. Jakobsson, and Petermann-2015 Scientific Party (2015), Petermann-2015 Expedition Launches International Collaboration in Arctic Science, *Witness the Arctic*.

Morlighem, M., et al. (2017), BedMachine v3: Complete Bed Topography and Ocean Bathymetry Mapping of Greenland From Multibeam Echo Sounding Combined With Mass Conservation, *Geophysical Research Letters*, *44*(21), 11,051-011,061, doi:10.1002/2017GL074954.

Mosher, D. C. (2012), 2011 Canadian High Arctic Seismic Expedition: CCGS Louis S. St-Laurent expedition report*Rep.*, 290 pp, Geological Survey of Canada, Geological Survey of Canada, Ottawa, Ontario.

Mosher, D. C., J. Shimeld, and B. C. Champman (2011), Canada Basin seismic reflection and refraction survey, western Arctic Ocean: CCGS Louis S. St-Laurent expedition report*Rep.*, 240 pp, Geological Survey of Canada, Geological Survey of Canada, Ottawa, Ontario.

Mosher, D. C., J. D. Shimeld, and D. R. Hutchinson (2009), 2009 Canada Basin seismic reflection and refraction survey, western Arctic Ocean: CCGS Louis S. St-Laurent expedition report*Rep.*, 266 pp, Geological Survey of Canada, Geological Survey of Canada, Ottawa, Ontario.

Naryshkin, G. (1999), Bottom relief of the Arctic Ocean, *Bathymetric contour map*, Russian Academy of Sciences, St Petersburg.
Naryshkin, G. (2001), Bottom relief of the Arctic Ocean, *Bathymetric contour map*, Russian Academy of Sciences.
Newton, G. B. (2000), The Science Ice Exercise Program: History, achievment, and future of SCICEX., *Arctic Research of the United States*, *14*(fall/winter), 2-7.
Noormets, R., J. A. Dowdeswell, M. Jakobsson, and C. Ó Cofaigh (2010), New evidence on past ice flow and iceberg activity on the southern Yermak Plateau, in *American Geophysical Union Fall Meeting, San Fransisco*, edited, pp. C43C-0564, American Geophysical Union, San Fransisco.
Pedrosa, M. T., A. Camerlenghi, B. De Mol, R. Urgeles, M. Rebesco, and R. G. Lucchi (2011), Seabed morphology and shallow sedimentary structure of the Storfjorden and Kveithola trough-mouth fans (North West Barents Sea), *Marine Geology*, *286*(1–4), 65-81, doi:10.1016/j.margeo.2011.05.009.
Perry, R. K., H. S. Fleming, J. R. Weber, Y. Kristoffersen, J. K. Hall, A. Grantz, G. L. Johnson, N. Z. Cherkis, and B. Larsen (1986), Bathymetry of the Arctic Ocean, Bathymetry of the Arctic Ocean, Boulder, Colorado.
Prescott, M. M., and M. Zimmermann (2015), Smooth sheet bathymetry of Norton Sound*Rep. Memo. NMFS-AFSC-298*, 23 pp, U.S. Department of Commerce, doi:https://doi.org/10.7289/V5V69GJ9.
Rebesco, M., et al. (2011), Deglaciation of the western margin of the Barents Sea Ice Sheet - A swath bathymetric and sub-bottom seismic study from the Kveithola Trough, *Marine Geology*, *279*(1-4), 141-147, doi:10.1016/j.margeo.2010.10.018.
Reece, R. S., S. P. S. Gulick, G. L. Christeson, B. K. Horton, H. van Avendonk, and G. Barth (2013), The role of farfield tectonic stress in oceanic intraplate deformation, Gulf of Alaska, *Journal of Geophysical Research: Solid Earth*, *118*(5), 1862-1872, doi:10.1002/jgrb.50177.
Rignot, E., I. Fenty, Y. Xu, C. Cai, and C. Kemp (2015), Undercutting of marine-terminating glaciers in West Greenland, *Geophysical Research Letters*, *42*(14), 5909-5917, doi:10.1002/2015gl064236.
Rignot, E., I. Fenty, Y. Xu, C. Cai, I. Velicogna, C. Ó. Cofaigh, J. A. Dowdeswell, W. Weinrebe, G. Catania, and D. Duncan (2016a), Bathymetry data reveal glaciers vulnerable to ice-ocean interaction in Uummannaq and Vaigat glacial fjords, west Greenland, *Geophysical Research Letters*, *43*(6), 2667-2674, doi:10.1002/2016GL067832.
Rignot, E., et al. (2016b), Modeling of ocean-induced ice melt rates of five west Greenland glaciers over the past two decades, *Geophysical Research Letters*, *43*(12), 6374-6382, doi:10.1002/2016gl068784.
Schumann, K., D. Völker, and W. R. Weinrebe (2012), Acoustic mapping of the Ilulissat Ice Fjord mouth, West Greenland, *Quaternary Science Reviews*, *40*(0), 78-88, doi:10.1016/j.quascirev.2012.02.016.
Sohn, R. A., et al. (2008), Explosive volcanism on the ultraslow-spreading Gakkel Ridge, Arctic Ocean, *Nature*, *453*(26 June), 1236-1238, doi:doi:10.1038/nature07075.
The SWERUS Scientific Party (2016a), Cruise Report for SWERUS-C3 Leg 1*Rep.*, 200 pp, Bolin Centre for Climate Research, Stockholm.
The SWERUS Scientific Party (2016b), Cruise Report for SWERUS-C3 Leg 2*Rep.*, 190 pp, Bolin Centre for Climate Research, Stockholm.
Travaglini, P. G. (2014), Final Field Report: Arctic Survey - UNCLOS 2014*Rep.*, 82 pp, Canadian Hydrographic Survey, Natural Resources Canada.
Westbrook, G. K., et al. (2009), Escape of methane gas from the seabed along the West Spitsbergen continental margin, *Geophys. Res. Lett.*, *36*(15), L15608, doi:10.1029/2009gl039191.

Wood, M., E. Rignot, I. Fenty, D. Menemenlis, R. Millan, M. Morlighem, J. Mouginot, and H. Seroussi (2018), Ocean-Induced Melt Triggers Glacier Retreat in Northwest Greenland, *Geophysical Research Letters*, *45*(16), 8334-8342, doi:10.1029/2018gl078024.

Youngblut, S. (2015), Final Field Report: Amundsen Basin Survey: UNCLOS 2015*Rep.*, 37 pp, Canadian Hydrographic Survey, Natural Resources Canada.

Zayonchek, A. V., et al. (2010), The Structure of Continent-Ocean transition zone at North-West Barents Sea Margin (results of 24–26$^{th}$ cruises of RV Akademik Nikolaj Strakhov, 2006-2009 ), in *Contribution of Russia to International Polar Year*, edited by M. Paulsen, pp. 111-157.

Zimmermann, M., and M. M. Prescott (2014), Smooth sheet bathymetry of Cook Inlet, Alaska*Rep. Memo. NMFS-AFSC-275*, 32 pp, U.S. Department of Commerce.

Zimmermann, M., M. M. Prescott, and P. J. Haeussler (2019), Bathymetry and Geomorphology of Shelikof Strait and the Western Gulf of Alaska, *Geosciences*, *9*(10), 409, doi:doi:10.3390/geosciences9100409.

Zimmermann, M., M. M. Prescott, and C. N. Rooper (2013), Smooth sheet bathymetry of the Aleutian Islands*Rep. Memo. NMFS-AFSC-250*, 43 pp, U.S. Department of Commerce.