CURRICULUM VITAE
Leah Trafford McRaven

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Education

M.A. in Earth and Environmental Science, Columbia University, 2016
B.S. in Physics and B.S. in Mathematics, The University of Oklahoma, 2010

Professional Experience

Research Specialist, Woods Hole Oceanographic Institution, 2025 – present
Research Associate III, Woods Hole Oceanographic Institution, 2019 – 2025
Research Associate II, Woods Hole Oceanographic Institution, 2017 – 2019
Research Assistant II, 2010-2014
Research Assistant I, 2010

Research:

- Lead and support research for peer-reviewed publications, proposals, and annual reports
- Oversee proposal budgeting and data management plans
- Design and edit schematics for publications

Data Processing:

- Process, calibrate, and analyze shipboard and moored hydrographic data: specialized in bottle calibration of CTD sensors, shipboard ADCP, MicroCAT, McLane Moored Profiler data
- Author processing reports and prepare data for long-term archive facilities
- Write code to manipulate, visualize, and analyze oceanographic data

Field Experience:

- Serve as chief scientist, technical lead, and hydrographic expert at sea and ashore; lead interdisciplinary teams; and facilitate sea-ice navigation efforts
- Coordinate operations for cruises with many collaborating groups and scientific objectives
- Manage foreign clearances, shipping logistics, and communications with marine operation managers

Graduate Research Assistant, Columbia University, 2014-2016, Advisor: Arnold Gordon

Surface salinity of the South China Sea:

- Utilized remote sensing and model products to explore upper ocean salinity-dependent dynamics of the South China Sea and oceanic heat transport through the Southeast Asian Seas

Salinity Processes in the Upper Ocean Regional Study 2 (SPURS-2):

- Investigated the impact of precipitation on surface salinity dilution and near-surface turbulence/mixing, and explored the subsequent impact on sea surface salinity representation in satellite products

Teaching Assistant, Columbia University, 2015-2016

Summer Intern, German Academic Exchange Program, University of Stuttgart, Germany, 2009

Visiting Student, The National Research Council, Ottawa, Ontario, Canada, 2008

National Science Foundation REU Participant, The University of Oklahoma, 2007

Laboratory Research Assistant, The University of Oklahoma, 2007

Physics and Mathematics Department Tutor, The University of Oklahoma, 2007-2010

At-sea Cruise Experience

Upstream Pathways of the Faroe Overflow (UFO)
- August 2025
  Sailing position: Technical Lead, CTD data processor

Overturning in the Subpolar North Atlantic Program (OSNAP)
- July 2024
  Sailing position: Chief Scientist

Monitoring the Western Arctic Boundary Current in a Warming Climate: Atmospheric Forcing and Oceanographic Response
- October 2020, Chief Scientist: Robert Pickart
  Sailing position: Logistics Manager, CTD data processor

Overturning in the Subpolar North Atlantic Program (OSNAP)
- July 2020, Chief Scientist: Robert Pickart
  Sailing position: Logistics Manager, CTD data processor

WHOI Internal Ship Time (AR41)
- November 18 – 22, 2019
  Sailing position: Chief Scientist

Distributed Biological Observatory – Northern Chukchi Integrated Study (DBO-NCIS)
- Aug 2019, Chief Scientist: Robert Pickart
  Sailing position: CTD and SADCP data processor

Overturning in the Subpolar North Atlantic Program (OSNAP)
- Sep 2018, Chief Scientist: Robert Pickart
  Sailing position: CTD data processor

Distributed Biological Observatory – Northern Chukchi Integrated Study (DBO-NCIS)
- Aug 2018, Chief Scientist: Robert Pickart
  Sailing position: CTD and SADCP data processor

Iceland-Greenland Seas Project
- Feb 2018, Chief Scientist: Robert Pickart
  Sailing position: CTD and SADCP data processor

Distributed Biological Observatory – Northern Chukchi Integrated Study (DBO-NCIS)
- Aug 2017, Chief Scientist: Robert Pickart
  Sailing position: CTD and SADCP data processor

Salinity Processes in the Upper Ocean Regional Study 2 (SPURS)
- Aug 2016, Chief Scientist: Andrew Jessup, APL-UW
  Sailing position: CTD watch stander

Line W
- May 2014, Chief Scientist: John Toole
  Sailing position: CTD data processor

Line W
- May 2013, Chief Scientist: John Toole
  Sailing position: CTD data processor

Line W
- Aug 2012, Chief Scientist: John Toole
  Sailing position: CTD data processor

CLIVAR Repeat Hydrography Section A22
- Mar 2012, Chief Scientist: Ruth Curry
  Sailing position: CTD watch stander

Dynamics of Abyssal Mixing and Interior Transports Experiment (DynaMITE)
- May 2012, Chief Scientist: Ruth Curry
  Sailing position: CTD data processor

KAUST: Coastal Hydrography and Circulation of the Red Sea
- Sept 2011, Chief Scientist: Amy Bower
  Sailing position: CTD and SADCP data processor

Line W
- July 2011, Chief Scientist: John Toole
  Sailing position: CTD data processor

Dynamics of Abyssal Mixing and Interior Transports Experiment (DynaMITE)
- May 2011, Chief Scientist: Ruth Curry
  Sailing position: CTD watch stander

Remote Cruise Support

Measuring the East Greenland Coastal Current on the Northeast Greenland Shelf
- September 2025, Chief Scientist: Nicholas Foukal
  Remote position: CTD data processor

Transport and fate of the Labrador Coastal Current
- September 2024, Chief Scientist: Nicholas Foukal
  Remote position: CTD data processor

Dense water pathways feeding the Faroe Bank Channel Overflow
- August 2024, Chief Scientist: Robert Pickart
  Remote position: Logistics Manager, CTD data processor

Monitoring the Western Arctic Boundary Current in a Warming Climate: Atmospheric Forcing and Oceanographic Response
- July 2024, Chief Scientist: Robert Pickart
  Remote position: Logistics Manager, CTD data processor

Transport and fate of the Labrador Coastal Current
- September 2023, Chief Scientist: Nicholas Foukal
  Remote position: CTD data processor

The tale of three systems: fate of primary production in the Chukchi Sea
- June 2023, Chief Scientist: Kevin Arrigo
  Remote position: CTD data processor

Monitoring the Western Arctic Boundary Current in a Warming Climate: Atmospheric Forcing and Oceanographic Response
- November 2022, Chief Scientist: Robert Pickart
  Remote position: Logistics Manager, CTD data processor

Harmful Algal Blooms in the warming Chukchi Sea: Leg 1
- July 2022, Chief Scientist: Robert Pickart
  Remote position: Logistics Manager, CTD data processor

Harmful Algal Blooms in the warming Chukchi Sea: Leg 2
- August 2022, Chief Scientist: Robert Pickart
  Remote position: Logistics Manager, CTD data processor

OOI Irminger Sea 8
- August 2022, Chief Scientist: John Lund
  Remote position: CTD data processor

Arctic Mercury Cycling
- May 2021, Chief Scientist: Robert Mason
  Remote position: CTD data processor

Monitoring the Western Arctic Boundary Current in a Warming Climate: Atmospheric Forcing and Oceanographic Response
- October 2018, Chief Scientist: Robert Pickart
  Remote position: Logistics Manager, CTD data processor

Peer-Reviewed Publications

de Jong, M.F., K. Fogaren, I. Le Bras, and **L.T. McRaven**. Convection in the central Irminger Sea; insights into variability and the roles of surface forcing and stratification from 19 years of high resolution mooring data. *Journal of Geophysical Research*, 130, https://doi.org/10.1029/2023JC020799

Pickart, R.S., M.A. Spall, F. Bahr, L. Lago, P. Lin, A. Pacini, J. Huang, K.R. Arrigo, M. Mills, G. van Dijken **L.T. McRaven**, and S. Roberts, 2024. Vertical carbon export during a phytoplankton bloom in the Chukchi Sea: Physical setting and frontal subduction. Journal of Geophysical Research, 129, e2024JC021465. https://doi.org/10.1029/2024JC021465

Huang, J., R.S. Pickart, F. Bahr, **L.T. McRaven**, J-E. Tremblay, C. Michel, E. Jeansson, B. Kopec, J.M. Welker, and S.R. Ólafsdóttir, 2024. Water mass evolution and general circulation of Baffin Bay: Observations from two shipboard surveys in 2021 *Progress in Oceanography, 229,* https://doi.org/10.1016/j.pocean.2024.103322

Macdonald, A.M., L. Hiron, **L.T. McRaven**, L. Stolp, K. Ström, R. Hudak, S.R. Smith, J. Hummon, M. Andres, 2024. A framework for multidisciplinary science observations from commercial ships. *ICES Journal of Marine Science*. https://doi.org/10.1093/icesjms/fsae011

Fachon, E., R. S. Pickart, G. Sheffield, and 18 Co-authors, 2024. Tracking a large-scale and highly toxic Arctic algal bloom: Rapid detection and risk communication. *Limnology and Oceanography Letters*, https://doi.org/10.1002/lol2.10421

Pickart, R.S., P. Lin, F. Bahr, and **L.T. McRaven**, and 30 co-authors, 2023. The Pacific water flow branches in the Chukchi Sea. *Progress in Oceanography*, 219, https://doi.org/10.1016/j.pocean.2023.103169

Anderson, D. M., E. Fachon, R. S. Pickart, P. Lin, A. D. Fischer, M. L. Richlen, V. Uva, M. L. Borsnahan, **L. McRaven**, F. Bahr, K. Lefebvre, J. M. Grebmeier, S. L. Danielson, Y. Lyu, and Y. Fukai, 2021. Evidence for massive and recurrent toxic blooms of Alexandrium catenella in the Alaskan Arctic. *Proceedings of the National Academy of Sciences*, https://doi.org/10.1073/pnas.2107387118

Zippel, S., J.T. Farrar, C. Zappa, U. Miller, L. St. Laurent, T. Ijichi, R. Weller, **L. McRaven**, S. Nylund, and D. Le Bel, 2021. Moored Turbulence Measurements using Pulse-Coherent Doppler Sonar, *J. Atmos. Ocean. Technol*., https://doi.org/10.1175/JTECH-D-21-0005.1

Pickart, R.S., M.A. Spall, P. Lin, F. Bahr**, L.T. McRaven**, K.R. Arrigo, J.M. Grebmeier, 2021. Physical Controls on the Macrofaunal Benthic Biomass in Barrow Canyon, Chukchi Sea. *Journal of Geophysical Research: Oceans*, 126. https://doi.org/10.1029/2020JC017091

Huang, J., R.S. Pickart, F. Bahr, **L.T. McRaven**, F. Xu, 2021. Wintertime water mass transformation in the western Iceland and Greenland Seas. *Journal of Geophysical Research: Oceans*, 126. https://doi.org/10.1029/2020JC016893

Creamean, J.M., J.N. Cross, R.S. Pickart. **L.T. McRaven**, P. Lin, A. Pacini, R. Hanlon, D.G. Schmale, J. Ceniceros, T. Aydell, N. Colombi, E. Bolger, and P.J. DeMott, 2019. Ice nucleating particles carried from below a phytoplankton bloom to the Arctic atmosphere. *Geophysical Research Letters,* 46. https://doi.org/10.1029/2019GL083039

Renfrew, I.A., R.S. Pickart, and 56 co-authors, 2019. The Iceland-Greenland Seas Project. *Bulletin of the American Meteorological Society.* https://doi.org/10.1175/BAMS-D-18-0217.1

Lin, P., R. S. Pickart, **L.T. McRaven**, K. R. Arrigo, F. Bahr, K. E. Lowry, D. A. Stockwell, and C. W. Mordy, 2019. Water mass evolution and circulation of the northeastern Chukchi Sea in summer: Implications for nutrient distributions. *Journal of Geophysical Research: Oceans,* 124. https://doi.org/10.1029/2019JC015185

Aghajani-Talesh, A., M. Falkenau, V.V. Volchkov, **L. Trafford**, A. Griesmaier and T. Pfau, 2010, Laser cooling of a magnetically guided ultracold atom beam, *New Journal of Physics*

Dataset and Code Archival

McRaven, L.T. & R. Pickart. (2025). Arctic Observing Network (AON) Conductivity Temperature Depth (CTD) data from the 2024 Beaufort shelf-edge cruise (HLY2401), as part of the Monitoring the Western Arctic Boundary Current in a Warming Climate: Atmospheric Forcing and Oceanographic Response cruise. Arctic Data Center. Dataset. doi:10.18739/A2T727J0V

McRaven, L.T. & R. Pickart. (2024). Conductivity Temperature Depth (CTD) data from the Norseman II (NRS22-1s and NRS22-2s), as part of the 2022 Origin and Fate of Harmful Algal Blooms in the Warming Chukchi Sea cruise. Arctic Data Center. Dataset. doi:10.18739/A2B853K56.

McRaven, L.T. & R. Pickart. (2024). Arctic Observing Network (AON) Conductivity Temperature Depth (CTD) data from the 2020 Beaufort shelf-edge cruise (SKQ2020-14s), as part of the Monitoring the Western Arctic Boundary Current in a Warming Climate: Atmospheric Forcing and Oceanographic Response cruise. Arctic Data Center. Dataset. doi:10.18739/A2GM81Q6G.

Bahr, F.; **McRaven, L.T.**; Pickart, Robert S. (2023). ChukSA Climatology, Version 1.0: Ocean velocity profiles collected by ADCP in the Chukchi Sea, Bering Strait, and Bering Sea in 2002-2022 (NCEI Accession 0283043). NOAA National Centers for Environmental Information. Dataset. https://doi.org/10.25921/q8rx-9r22.

McRaven, L.T. (2022). Water temperature, salinity, and others taken by CTD and Niskin bottles from the research vessel Neil Armstrong, cruise AR60-01, in the North Atlantic from 08-03-2021 to 08-17-2021 (NCEI Accession 0247461). NOAA National Centers for Environmental Information. Dataset. https://doi.org/10.25921/p8qe-me08.

McRaven, L.T. (2022). Water temperature, salinity, and others taken by CTD and Niskin bottles from the research vessel Neil Armstrong, cruise AR35-05, in the North Atlantic from 08-02-2019 to 08-25-2019 (NCEI Accession 0251721). NOAA National Centers for Environmental Information. Dataset. https://doi.org/10.25921/61kn-qv10.

McRaven, L.T. (2022). Water temperature, salinity, and others taken by CTD and Niskin bottles from the research vessel Neil Armstrong, Irminger Sea 5 cruise AR30-03, in the North Atlantic from 2018-06-06 to 2018-06-22 (NCEI Accession 0252116). NOAA National Centers for Environmental Information. Dataset. https://doi.org/10.25921/bfsv-yp35.

McRaven, L.T. (2022). Water temperature, salinity, and others taken by CTD and Niskin bottles from the research vessel Neil Armstrong in the North Atlantic Ocean during 2020 Ocean Observations Initiative (OOI) Irminger Sea 7 and Overturning in the Subpolar North Atlantic Program – Greenland Deep Western Boundary Current, ONSAP-GDWBC, cruise AR46, from 2020-08-08 to 2020-08-26 (NCEI Accession 0252117). NOAA National Centers for Environmental Information. Dataset. https://doi.org/10.25921/51b4-ac30.

Pickart, R. & **L.T. McRaven**. (2022). Conductivity-Temperature-Depth (CTD) data as part of the Overturning in the Subpolar North Atlantic Program (OSNAP), from 2020 on the R/V Neil Armstrong. Georgia Tech Library. https://doi.org/10.35090/gatech/66767.

Pickart, R. & **L.T. McRaven**. (2022). Conductivity-Temperature-Depth (CTD) data as part of the Overturning in the Subpolar North Atlantic Program (OSNAP), from 2018 on the R/V Neil Armstrong. Georgia Tech Library. https://doi.org/10.35090/gatech/66765.

Pickart, R. & **L.T. McRaven**. (2018). Conductivity-Temperature-Depth (CTD) data as part of the OSNAP (Overturning in the Subpolar North Atlantic Program), from 2016 on the R/V Neil Armstrong. Duke Digital Repository. https://doi.org/10.7924/r4m61gc19.

Pickart, R. & **L.T. McRaven**. (2018). Conductivity-Temperature-Depth (CTD) data as part of the OSNAP (Overturning in the Subpolar North Atlantic Program), from 2014 on the R/V Knorr (KN221-03). Duke Digital Repository. https://doi.org/10.7924/r4qz26535

Pickart, R. & **L.T. McRaven**. (2021). Arctic Observing Network (AON) observations from the 2009-2010 Beaufort shelf-edge mooring array. Arctic Data Center. doi:10.18739/A29W09071.

Pickart, R. & **L.T. McRaven**. (2021). Arctic Observing Network (AON) observations from the 2010-2011 Beaufort shelf-edge mooring array. Arctic Data Center. doi:10.18739/A2GH9B984.

Pickart, R. & **L.T. McRaven**. (2021). Arctic Observing Network (AON) observations from the 2011-2012 Beaufort shelf-edge mooring array. Arctic Data Center. doi:10.18739/A2BR8MH3H.

Pickart, R. & **L.T. McRaven**. (2021). Arctic Observing Network (AON) observations from the 2012-2013 Beaufort shelf-edge mooring array. Arctic Data Center. doi:10.18739/A2707WP8K.
Pickart, R. & **L.T. McRaven**. (2021). Arctic Observing Network (AON) observations from the 2013-2014 Beaufort shelf-edge mooring array. Arctic Data Center. doi:10.18739/A23775W4T.
Pickart, R. & **L.T. McRaven**. (2019). Arctic Observing Network (AON) observations from the 2014-2016 Beaufort shelf-edge mooring array. Arctic Data Center. doi:10.18739/A29K45S73.
Pickart, R. & **L.T. McRaven**. (2021). Arctic Observing Network (AON) observations from the 2016-2018 Beaufort shelf-edge mooring array. Arctic Data Center. doi:10.18739/A2ZG6G797.
Pickart, R. & **L.T. McRaven**. (2022). Arctic Observing Network (AON) observations from the 2018-2020 Beaufort shelf-edge mooring array. Arctic Data Center. doi:10.18739/A2HX15S0W.
Pickart, R. & **L.T. McRaven**. (2024). Arctic Observing Network (AON) observations from the 2020-2022 Beaufort shelf-edge mooring array. Arctic Data Center. doi:10.18739/A27659H36.
McRaven, L. & Robert Pickart. (2022). Arctic Observing Network (AON) Conductivity Temperature Depth (CTD) data from the 2022 Beaufort shelf-edge cruise (SKQ2022-15s), as part of the Monitoring the Western Arctic Boundary Current in a Warming Climate: Atmospheric Forcing and Oceanographic Response cruise. Arctic Data Center. doi:10.18739/A2MC8RJ0V.
McRaven, L. & Robert Pickart. (2024). Conductivity Temperature Depth (CTD) data from the Norseman II (NRS22-1s and NRS22-2s), as part of the 2022 Origin and Fate of Harmful Algal Blooms in the Warming Chukchi Sea cruise. Arctic Data Center. doi:10.18739/A2B853K56.
McRaven, L. & Robert Pickart. (2022). Shipboard hydrographic measurements from the Fate of freshwater and heat from the West Greenland Current project (2021). Arctic Data Center. doi:10.18739/A2DB7VR5M.
McRaven, L. & Robert Pickart. (2024). Arctic Observing Network (AON) Conductivity Temperature Depth (CTD) data from the 2020 Beaufort shelf-edge cruise (SKQ2020-14s), ... doi:10.18739/A2GM81Q6G.
McRaven, L. & Robert Pickart. (2022). Wintertime (2020-2021) hydrographic measurements in the Northern Bering and Chukchi Seas from USCGC (United States Coast Guard Cutter) Polar Star. Arctic Data Center. doi:10.18739/A2N00ZV6R.
McRaven, L. & Robert Pickart. (2021). Conductivity-Temperature-Depth (CTD) data from the 2019 Distributed Biological Observatory - Northern Chukchi Integrated Study (DBO-NCIS) cruise on US Coast Guard Cutter (USCGC) Healy (HLY1901). Arctic Data Center. doi:10.18739/A2D21RK4M.
McRaven, L. & Robert Pickart. (2021). Conductivity Temperature Depth (CTD) data from the Iceland Greenland Seas Project (IGP) on NRV Alliance in 2018. Arctic Data Center. doi:10.18739/A2ZC7RV9Z.
McRaven, L. & Robert Pickart. (2021). Arctic Observing Network (AON) Conductivity Temperature Depth (CTD) data from the 2018 Beaufort shelf-edge cruise (HLY1803), ... Arctic Data Center. doi:10.18739/A2NC5SD52.
McRaven, L. & Robert Pickart. (2021). Conductivity-Temperature-Depth (CTD) data from the 2018 Distributed Biological Observatory - Northern Chukchi Integrated Study (DBO-NCIS) cruise on USCGC (US Coast Guard Cutter) Healy (HLY1801). Arctic Data Center. doi:10.18739/A2HT2GC7Z.
McRaven, L. & Robert Pickart. *(2017).* Distributed Biological Observatory (DBO) and Conductivity-Temperature-Depth (CTD) data along DBO1 from DBO-NCIS (Northern Chukchi Integrated. Study) on the USCGC (United States Coast Guard Cutter) Healy (HLY1702), Bering Sea, 2017. Arctic Data Center. doi:10.18739/A2FN10S7T.
McRaven, L. & Robert Pickart. (2017). Distributed Biological Observatory (DBO) and Conductivity-Temperature-Depth (CTD) data along DBO3 from DBO-NCIS (Northern Chukchi Integrated. Study) on the USCGC (United States Coast Guard Cutter) Healy (HLY1702), Southern Chukchi Sea, 2017. Arctic Data Center. doi:10.18739/A29W09033.
McRaven, L. & Robert Pickart. (2017). Distributed Biological Observatory (DBO) and Conductivity-Temperature-Depth (CTD) data along DBO4 from DBO-NCIS (Northern Chukchi Integrated. Study) on the USCGC (United States Coast Guard Cutter) Healy (HLY1702), Northeast Chukchi Sea, 2017. Arctic Data Center. doi:10.18739/A2639K593.

McRaven, L. & Robert Pickart. (2017). Distributed Biological Observatory (DBO) and Conductivity-Temperature-Depth (CTD) data along DBO5 from DBO-NCIS (Northern Chukchi Integrated Study) on the USCGC (United States Coast Guard Cutter) Healy (HLY1702), Chukchi Sea, 2017. Arctic Data Center. doi:10.18739/A22B8VC6F.

Presentations

Talks (presenter underlined)

McRaven L.T., 2025. *Role of the Mackenzie River outflow on convection during wintertime freeze-up*, Pickart Lab retreat, Bergen, Norway, 2025.

McRaven L.T. and A. Davies, 2025. *Navigating icy seas during the 2024 AR84-02 OSNAP cruise*, PO Buoy Lunch Talks, Woods Hole, MA, 2025.

Pickart, R., P. Lin, F. Bahr, **L.T. McRaven**, J. Huang, A. Pacini, 2024. *The Pacific flow branches in the Eastern Chukchi Sea*, AGU Ocean Sciences Meeting, New Orleans, LA, Feb 2024.

Lago, L., R. Pickart, E. Fachon, D. Anderson, P. Lin, **L.T. McRaven**, F. Bahr, A. Rajagopalan, 2024. Water mass distribution and circulation in the Chukchi Sea in relation to a massive harmful algal bloom during summer 2022, AGU Ocean Sciences Meeting, New Orleans, LA, Feb 2024.

Jeansson, E., A. Brakstad, K. Våge, K. Jackson-Misje, **L.T. McRaven**, S. Olafsdottir, R. Pickart, 2024. *Tracing the Upstream Sources to the Denmark Strait Overflow from Its Hydro-Chemical Property Envelope*, AGU Ocean Sciences Meeting, New Orleans, LA, Feb 2024.

Andres, M., A. Macdonald, L. Stolp, **L.T. McRaven**, R. Hudak, T. Rossby, C. Flagg, J. Hummon, S. Smith, 2023. *Science RoCS*, 12th Session of the Ship Observations Team, Melbourne, Australia, May 2023.

Andres, M., A. Macdonald, K. Ström, L. Stolp, **L.T. McRaven**, T. Rossby, C. Flagg, J. Hummon, S. Smith, *A Partnership to Collect Air/Sea Observations in the Gulf of Mexico and Western Caribbean with the M/V Bulk Xaymaca*, UGOS Working Monthly Meeting, March 2023.

McRaven, L.T., 2022. *Visualizing CTD Contamination*, UNOLS RVTEC, Seattle, WA, Nov 2022.

McRaven, L.T., 2022. *Improvements to OOI Irminger Sea Array shipboard hydrographic data*, Ocean Observatories Initiative Lunch and Learn, Woods Hole, MA, 2022.

de Jong, F., I.A. Le Bras, **L.T. McRaven**, M. Sterl, E. Duyck, N. Fried, 2022. *Variability in Irminger Sea convection and hydrography from 2003 through 2020*, EGU General Assembly, Vienna, Austria & Online, May 2022.

de Jong, F., I.A. Le Bras, **L.T. McRaven**, M. Sterl, E. Duyck, N. Fried, 2022. *Variability in Irminger Sea convection and hydrography*, 2022 US AMOC Meeting, Woods Hole, MA, April 2022.

Fogaren, K.E., H.I. Palevsky, I.A. Le Bras, **L.T. McRaven**, D. Nicholson, 2022. Influence of biological and physical processes on carbon uptake over annual cycles in the Irminger Sea, Ocean Sciences Meeting, Online, Feb 2022.

Pickart, R.S., M.A. Spall, P. Lin, F. Bahr, **L.T. McRaven**, K.R. Arrigo, J.M. Grebmeier, 2022. *Physical controls on the macrofaunal benthic biomass in Barrow Canyon, Chukchi Sea,* Ocean Sciences Meeting, Online, Feb 2022.

McRaven L.T., 2022. *Optimizing hydrographic data collection in the Arctic and Subarctic: Lessons from five years of shipboard surveys*, PO Buoy Lunch Talks, Woods Hole, MA, 2022.

McRaven L.T., 2022. *Optimizing hydrographic data collection in the Arctic and Subarctic: Lessons from five years of shipboard surveys*, Pickart Lab retreat, Bergen, Norway, 2022.

McRaven L.T., 2020. *Two weeks of science in four days at sea*, PO Buoy Lunch Talks, Woods Hole, MA, 2020.

McRaven L.T. and R.S. Pickart, 2017. *Highlights of DBO 2010-2017 data time series: Physical Oceanography*, Distributed Biological Observatory Meeting, Seattle, WA, 2017.

McRaven L.T. and R. Pickart, 2017. *DBO data access and management: Physical Oceanography*, Distributed Biological Observatory Meeting, Seattle, WA, 2017.

Gordon A., **L. Trafford**, and C.F. Giulivi, 2015. *Southeast Asian Seas: surface layer salinity and interocean exchange*, Ocean Science Conference on Salinity and Freshwater Changes in the Ocean, Hamburg Germany, 2015.

Trafford L. and P. White, 2011. *PO Instrument and Mooring Databases*, PO Data Management Talks, Woods Hole, MA, 2011.

Tupper, G., **L. Trafford**, and C. Nobre, 2011. *Salinity Now: Salinometry, Data Acquisition and CTD data Calibration*, PO Data Management Talks, Woods Hole, MA, 2011.

Farrar, J.T., C.J. Zappa, R.A. Weller, and **L. Trafford**, 2011. *A long time series of upper-ocean turbulent dissipation from a deep-ocean surface mooring equipped with Nortek HR Profilers*, Nortek User Symposium, Newport, RI., 2011.

Trafford, L., 2009. *Modeling a high flux atom guide for continuous loading of a Cr trap*, 1st Annual Meeting of the University Nebraska's Conference for Undergraduate Women in Physics, Lincoln, Nebraska, 2009.

Trafford, L., 2007. *Temperature control for an in-vacuum effusive beam source of radicals*, University of Oklahoma Physics Research Experience for Undergraduates Presentation Series, Norman, Oklahoma, 2007.

Posters (presenter underlined)

McRaven, L.T., R. Pickart, P. Lin, D.B. Fissel, 2024. Role of the Mackenzie River outflow on convection during wintertime freeze-up, AGU Ocean Sciences Meeting, New Orleans, LA, Feb 2024.

Huang, J., R. Pickart, F. Bahr, **L.T. McRaven**, J.E. Tremblay, C. Michel, E. Jeansson, B.G. Kopec, J.M Welker, S. Olafsdottir, 2024. Water mass structure and general circulation of Baffin Bay: Observations from two shipboard surveys in 2021, AGU Ocean Sciences Meeting, New Orleans, LA, Feb 2024.

Bahr, F., R. Pickart, **L.T. McRaven**, P. Lin, 2024. ChukSA: A shipboard ADCP climatology for the Chukchi Sea, AGU Ocean Sciences Meeting, New Orleans, LA, Feb 2024.

Ström, K., A.M. Macdonald, L. Stolp, M. Andres, **L.T. McRaven**, R. Hudak, 2024. Science RoCS: Integrated Interdisciplinary Platforms for the Future, AGU Ocean Sciences Meeting, New Orleans, LA, Feb 2024.

Andres, M., J.M. Hummon, L. Hiron, **L.T. McRaven**, S.M. Soares, L. Stolp, A.M. Macdonald, 2024. MV *Bulk Xaymaca:* A New Platform to Study Processes in the Gulf of Mexico and Western Caribbean across Time and Space Scales, AGU Ocean Sciences Meeting, New Orleans, LA, Feb 2024.

Pickart, R.S., P. Lin, F. Bahr, **L.T. McRaven**, 2023. New insights on the pathways of Pacific water across the Chukchi shelf based on the Distributed Biological Observatory repeat sections, Alaska Marine Science Symposium, Anchorage, Alaska, 2023.

Macdonald, A.M., L. Stolp, M. Andres, **L.T. McRaven**, and K. Ström, 2023. Integrated Interdisciplinary Platforms for the Future, Effects of Climate Change on the World's Ocean, Bergen Norway, April 2023.

McRaven L.T., R.S. Pickart, P. Lin, and D. Torres, 2022. Hydrography and circulation of Mackenzie Canyon during autumn freeze-up: results from a synoptic shipboard survey, Ocean Sciences Meeting, Feb 2022.

Andres, M., K. Strøm, and **L.T. McRaven**, 2021. Transforming Ocean Science: Fostering a Network for Cooperative Science Research on Commercial Ships (Science RoCS), *Marine Technology Society Journal*, 55(3), 126-127, https://doi.org/10.4031/MTSJ.55.3.6

Ström, K., **L.T. McRaven**, M. Andres, A. Macdonald, L. Stolp, J. Hummon, T Rossby, J. Herndon, 2021. Transforming Ocean Science: Fostering a Network for Cooperative: Science Research on Commercial Ships (Science RoCS), NAS Ocean Decade Ocean Shots, virtual meeting, 2021.

McRaven, L.T., P. Lin, R.S. Pickart, K.R. Arrigo, F. Bahr, K.E. Lowry, D.A. Stockwell, and C.W. Mordy, 2020. Water Mass Evolution and Circulation of the Northeastern Chukchi Sea in Summer: Implications for Nutrient Distributions, Ocean Sciences Meeting, San Diego, CA, 2020.

Pickart, R.S., M.A. Spall, P. Lin, K.R. Arrigo, J.M. Grebmeier, **L.T. McRaven**, 2020. Why is Barrow Canyon a Benthic Hotspot?, Alaska Marine Science Symposium, Anchorage, Alaska, 2020.

Anderson, D., R.S. Pickart, E. Fachon, P. Lin, M. Richlen, M. Brosnahan, V. Uva, **L.T. McRaven**, F. Bahr, K. Hubbard, 2020. Evidence for Massive and Expanding Harmful Algal Blooms in the Alaskan Arctic, Alaska Marine Science Symposium, Anchorage, Alaska, 2020.

Creamean, J.M., J.N. Cross, R.S. Pickart. **L.T. McRaven**, P. Lin, A. Pacini, R. Hanlon, D.G. Schmale, J. Ceniceros, T. Aydell, N. Colombi, E. Bolger, and P.J. DeMott, 2019. Ice nucleating particles carried from below a phytoplankton bloom to the Arctic atmosphere, Sixth International Symposium on Arctic Research, Japan 2020.

Pickart, R.S., M.A. Spall, P. Lin, W-J. von Appen, D. Mastropole, H. Valdimarsson, T.W.N. Haine, M. Almansi, **L.T. McRaven**, 2019. Dynamics of the high-frequency variability in Denmark Strait, EGU General Assembly 2019, Vienna, Austria, 2019.

Lin, P., R.S. Pickart, **L.T. McRaven**, 2019. Circulation and Hydrography of the Northeastern Chukchi Sea in Summer, Alaska Marine Science Symposium, 2019.

Trafford, L., A.L. Gordon, and C.F. Giulivi, 2016. Variability of Surface Salinity within the Southeast Asian Seas, Ocean Sciences Meeting, New Orleans, Louisiana, 2016.

Schwettmann, A., J. Sedlacek, **L. Trafford**, and J. P. Shaffer, 2009. Atom-chip trap for Rydberg atom experiments, Bulletin of the American Physical Society: 40th Annual Meeting of the APS Division of Atomic, Molecular and Optical Physics, Charlottesville, Virginia, 2009.

Sivakumar, P., C.P. McRaven, D. Combs, **L. Trafford**, and N. Shafer-Ray, 2007. A continuous molecular beam source of Lead Monofluoride, Bulletin of the American Physical Society: 38th Annual Meeting of the APS Division of Atomic, Molecular and Optical Physics, Calgary, Canada, 2007.

Proposals

External Proposals

NSF OCE (2024): Collaborative Research: Collaborative Research: Filling knowledge gaps in current-stress-wind interactions across mesoscale and submesoscale ocean fronts and eddies in the Gulf of Mexico (resubmission). *Declined.*

- FSU (lead) team: Luna Hiron (PI), Mark Bourassa (co-PI), Shawn Smith (co-PI)
- WHOI team: Alison M. Macdonald (PI), **Leah McRaven** (co-PI)
- UCSD team: Saulo M. Soares (PI)
- UM team: Björn Lund (PI), Hans C. Graber (co-PI)

NSF OCE (2023): Collaborative Research: Understanding current-stress-wind interactions across mesoscale ocean fronts and eddies in the Loop Current system. *Declined.*

- FSU (lead) team: Luna Hiron (PI), Mark Bourassa (co-PI), Shawn Smith (co-PI)
- WHOI team: Alison M. Macdonald (PI), Irina Rypina (co-PI), **Leah McRaven** (co-PI)
- UCSD team: Saulo M. Soares (PI)
- UM team: Björn Lund (PI), Hans C. Graber (co-PI)

NSF Convergence Accelerator Track E (2022): Designing an Integrated Platform for Science Research on Commercial Ships. *Declined.*

- A.M. Macdonald (PI), R. Hudak (co-PI), **L. T. McRaven** (co-PI), K. Ström (co-PI)

WHOI Internal Proposals

McRaven, L.T., E. Cedarholm. Sea-Bird Scientific batch processing for shipboard CTD data*, 2025 Technical Staff Training Internal Proposal*, 2024. *Funded.*

McRaven, L.T., E. O'Brien, J.J. Johnson. Development and field testing of a hull-mountable camera system to improve and evaluate shipboard sonar installations, *Access to the Sea Internal Proposal,* 2023. *Declined.*

M. Andres, **L. McRaven**, L. Stolp, and K. Ström. Science Research on Commercial Ships (Science RoCS): Facilitating Caribbean and Gulf of Mexico (GoM) Measurements Using Instrumentation on the *MV Bulk Xaymaca, Access to the Sea Internal Proposal,* 2022. *Funded.*

McRaven, L.T., A. Pleuddemann. OOI Global Array shipboard CTD assessment*, Ocean Observatories Initiative Internal Proposal*, 2019. *Funded.*

McRaven, L.T., S. Wijffels, P. Robbins, J. Toole, H. Furey, J. Eaton, and M. Andres. WHOI Ship Time: Statistical Assessment of Salinity Sensors Experiment (SASSE)*, WHOI Ship Time Internal Proposal*, 2019. *Funded.*

Other Publications

WHOI Technical Reports

Furey, H.H., **L. Trafford**, A.S. Bower. A Crossroads of the Atlantic Meridional Overturning Circulation: the Charlie-Gibbs Fracture Zone data report August 2010-June 2012*, Technical Report*, Woods Hole Oceanographic Institution, 2014.

Cruise Reports

L.T. McRaven, J. Holte, K. Zhao, A. Houk, S. Gibson, H. Nagao, M. Nelson, G. Tupper, B. Freiberger. AR84-02 Cruise Report: Overturning in the Subpolar North Atlantic Program (OSNAP), *cruise report*, 2024.

Pickart, R.S., A. Pacini, D. Torres, J. Dunn, **L.T. McRaven**. Cruise Report for R/V *Sikuliaq* 2022-15S, *cruise report*, 2022.

Pickart, R.S., **L.T. McRaven**, F. Bahr, K. Horn, E. Fachon, D. Kulis, M. Goni, D. Stockwell, S. Lim, C. Payne. Cruise Report for R/V *Norseman II* 2022-01S, 2022-02S, *cruise report*, 2022.

Pickart, R.S., A. Pacini, D. Torres, J. Dunn, **L.T. McRaven**. SKQ2022-15S Cruise Report, *cruise report*, 2022.

Pickart, R.S., **L.T. McRaven**, D. Torres, E. Fachon, L. Juranek, S. Becker. SKQ2020-14S Cruise Report: Monitoring the Western Arctic Boundary Current in a Warming Climate: Atmospheric Forcing and Oceanographic Response, *cruise report*, 2020.

Pickart, R.S., **L.T. McRaven**, F. Bahr, I. Le Bras. AR45 Cruise Report: Overturning in the Subpolar North Atlantic Program (OSNAP), *cruise report*, 2020.

McRaven, L.T., J. Edson, M. Dever, J. Eaton, K. Jerram. AR41 Cruise Report: WHOI Internal Ship Time, *cruise report*, 2019.

Pickart, R.S., **L.T. McRaven**, F. Bahr, I. Le Bras. AR45 Cruise Report: Overturning in the Subpolar North Atlantic Program (OSNAP), *cruise report*, 2020.

Pickart, R.S., **L.T. McRaven**, D. Torres, I. Le Bras. AR30-06 Cruise Report: Overturning in the Subpolar North Atlantic Program (OSNAP), *cruise report*, 2018.

Pickart, R.S., A. Pacini, **L.T. McRaven**, F. Bahr, J. Dunn. HLY1803 Cruise Report: Monitoring the Western Arctic Boundary Current in a Warming Climate: Atmospheric Forcing and Oceanographic Response, *cruise report*, 2018.

Pickart, R.S., and 26 co-authors. Healy 1801 Cruise Report: Distributed Biological Observatory – Northern Chukchi Integrated Study, *cruise report*, 2018.

Pickart, R.S., and 9 co-authors. ALL0118 Cruise Report: The Iceland-Greenland Seas Project, *cruise report*, 2018.

Pickart, R.S., and 14 co-authors. Healy 1702 Cruise Report: Distributed Biological Observatory – Northern Chukchi Integrated Study, *cruise report*, 2017.

McRaven L.T. and R.S. Pickart. AR07-02 Cruise Report: Overturning in the Subpolar North Atlantic Program (OSNAP), *cruise report*, 2017.

Technical Data Reports

McRaven L.T., CTD biofouling impact on CTD data and usability, *Technical Report*, Woods Hole Oceanographic Institution, 2021. *Shared with WHOI's Shipboard Scientific Services Group and UNOLS CTD Best Practices working group.*

McRaven L.T., A. Plueddemann. OOI Argentine Basin preliminary CTD calibration summary, *Technical Report*, Woods Hole Oceanographic Institution, 2019. *Shared with OOI.*

Outreach projects

Arctic Explorations: An outreach project for the R/V Sikuliaq Arctic Observing Network Cruise, Fall 2022: https://drive.google.com/file/d/1A5PZuK7ylh72dskE2NS_OeGKM8as7qq0/view

- Led shore-based high school classes that included livestream events hosted at sea.

OOI Near-Real-Time data event
https://oceanobservatories.org/2021/09/near-real-time-ctd-data-from-irminger-8-cruise-august-2021/

- Authored posts as an expert hydrographer during the OOI Irminger 8 cruise to share tips on data processing and additional community resources.

Website Design

- The Iceland Greenland Seas Project website: **https://web.whoi.edu/all0118/**
- Distributed Biological Observatory – Northern Chukchi Integrated Study HLY1801 website: **https://web.whoi.edu/healy-1801/**
- Distributed Biological Observatory – Northern Chukchi Integrated Study HLY1702 website: **https://web.whoi.edu/healy-2017/**
- THOR: Transatlantic High-latitude Oceanography Retreat: **https://www2.whoi.edu/site/picarctic/thor/**
- Upstream Pathways of the Faroe Overflow (UFO) website: **https://www2.whoi.edu/site/picarctic/ufo/**

Committees and Leadership

- WHOI Polar Lunch coordinator (present)
- UNOLS CTD Best Practices working group member (2022 – present)
- WHOI Physical Oceanography Buoy Lunch coordinator (2019 – 2025)
- WHOI Room Naming Working Group (2020 – 2023)
- WHOI Committee on Diversity and Inclusion (2020 – 2022)
  - Messaging and Implementation working group co-lead
- Columbia University Department of Earth and Environmental Sciences rep. for Women in Science (2015 – 2016)
- Columbia University Department of Ocean and Climate Physics seminar organizer (2015 – 2016)
- WHOI Women's Committee web master and treasurer (2012 – 2014)

Community Involvement

- Woods Hole Daycare Cooperative Board President
- Invited panelist for the 2024 Undergraduate Women in Physics Conference hosted by Boston College and Wellesley College
  - https://sites.bc.edu/cuwip/speakers/
- Woods Hole Children's School of Science volunteer
- Invited WHOI Women on Ice 2019 panelist