MARION S ALBERTY

300 Forrestal Road, Princeton, NJ 08542

(+1) 330-259-5864 • malberty@princeton.edu • marion.s.alberty@gmail.com

EDUCATION

University of California San Diego (UCSD)   *Aug 2012 - Dec 2018*
Scripps Institution of Oceanography (SIO), La Jolla, CA
M.S. in Oceanography 2014
Ph.D. in Oceanography 2018

Cornell University, Ithaca, NY   *Aug 2008 - May 2012*
B.Sc. in Civil & Environmental Engineering

APPOINTMENTS

Postdoctoral Research Associate   *Feb 2019 - present*
Geophysical Fluid Dynamics Laboratory, Atmospheric and Oceanic Sciences, Princeton University, Princeton, NJ
Leave Jan.-May 2020, 50% time May 2020, leave June-Aug. 2020, 60% time Sept. 2020 to Aug. 2021, full-time thereafter.
Graduate Ph.D. Researcher   *Aug 2012 - Jan 2019*
Sprintall Group and Multiscale Ocean Dynamics Lab, SIO, La Jolla, CA
Graduate Student Researcher   *Jul-Aug 2012*
Send Lab, SIO, La Jolla, CA
Undergraduate Student Researcher   *Aug 2011 - May 2012*
Cowen Lab, Cornell University, Ithaca, NY

PEER-REVIEWED PUBLICATIONS

Link to google scholar page

[1] Marion S Alberty, Jakob Dörr, Phoebe Hudson, Céline Heuzé, and Tina Erica Odaka. Western arctic freshwater fluxes in omip2: Understanding ocean biases. *in preparation.*

[2] Marion S Alberty, Sonya Legg, and Robert Hallberg. Impact of submesoscale processes on frontal evolution in the Arctic. *in preparation.*

[3] Marion S Alberty, Jennifer A MacKinnon, Janet Sprintall, Matthew H Alford, John B Mickett, and Elizabeth C Fine. Observations of submesoscale mixed layer processes in the Arctic. *in preparation.*

[4] Marion S Alberty, Mary-Louise Timmermans, Sonya Legg, and Robert Hallberg. Investigating trends in bering strait transport. *in preparation.*

[5] C Germineaud, Sophie Cravatte, J Sprintall, MS Alberty, M Grenier, and Alexandre Ganachaud. Deep pacific circulation: New insights on pathways through the solomon sea. *Deep Sea Research Part I: Oceanographic Research Papers*, 171:103510, 2021.

[6] Marion S Alberty, Janet Sprintall, Jennifer MacKinnon, Cyril Germineaud, Sophie Cravatte, and Alexandre Ganachaud. Moored Observations of Transport in the Solomon Sea. *Journal of Geophysical Research: Oceans*, 2019.

[7] Marion S Alberty, Sam Billheimer, Madeline Hamann, Celia Ou, Veronica Tamsitt, Andrew J Lucas, and Matthew H Alford. A reflecting, steepening, and breaking internal tide in a submarine canyon. *Journal of Geophysical Research: Oceans*, 2017.

[8] Marion S Alberty, Janet Sprintall, Jennifer A MacKinnon, Alexandre Ganachaud, Sophie Cravatte, Gerard Eldin, Cyril Germineaud, and Angelique Melet. Spatial patterns of mixing in the Solomon Sea. *Journal of Geophysical Research: Oceans*, 2017.

[9] Alexandre Ganachaud, Sophie Cravatte, Janet Sprintall, Cyril Germineaud, Marion Alberty, Catherine Jeandel, Gerard Eldin, Nicolas Metzl, Sophie Bonnet, Mar Benavides, et al. The Solomon Sea: its circulation, chemistry, geochemistry and biology explored during two oceanographic cruises. *Elem Sci Anth*, 5, 2017.

[10] Cyril Germineaud, Alexandre Ganachaud, Janet Sprintall, Sophie Cravatte, Gérard Eldin, Marion S Alberty, and Emilien Privat. Pathways and Water Mass Properties of the Thermocline and Intermediate Waters in the Solomon Sea. *Journal of Physical Oceanography*, 46(10):3031–3049, 2016.

[11] Jennifer A MacKinnon, Jonathan D Nash, Matthew H Alford, Andrew J Lucas, John B Mickett, Emily L Shroyer, Amy F Waterhouse, Amit Tandon, Debasis Sengupta, Amala Mahadevan, et al. A tale of two spicy seas. *Oceanography*, 29(2):50–61, 2016.

UNREFEREED PUBLICATIONS

[1] Marion Sofia Alberty. *Water mass transport and transformation in the Tropics and Arctic.* PhD thesis, UNIVERSITY OF CALIFORNIA SAN DIEGO, 2018.

[2] Marion S Alberty, Cyril Germineaud, Janet Sprintall, Alexandre Ganachaud, and Sophie Cravatte. SPICE mooring data report: Description and quality control. Technical report, UC San Diego: Scripps Institution of Oceanography, Retrieved from https://escholarship.org/uc/item/6xd149s8, 2017.

SELECTED PRESENTATIONS

Alberty, M., S. Legg, & R. Hallberg: *The Impact of Submesoscale Dynamics on Arctic Freshwater Fronts*

June 2022, Ocean Mixing Gordon Research Conference, South Hadley, MA [poster]
March 2022, Ocean Sciences Meeting, virtual

Alberty, M., S. Legg, R. Hallberg, J. MacKinnon, J. Sprintall, M. Alford, J. Mickett, & E. Fine: *Quantifying the impact of submesoscale dynamics on the evolution of Arctic freshwater fronts*

April 2021, European Geosciences Union, virtual
February 2020, Ocean Sciences Meeting, San Diego, CA [poster]

Alberty, M., J. MacKinnon, J. Sprintall, M. Alford, J. Mickett, & E. Fine: *Observations of Submesoscale Mixed Layer Processes in the Arctic*

June 2018, Gordon Research Conference on Ocean Mixing, Andover, NH [poster]
May 2016, 48th Liege Colloquium on Submesoscale Processes, Liege, Belgium [poster]

Alberty, M., J. Sprintall, S. Cravatte, A. Ganachaud, C. Germineaud, J. MacKinnon, & G. Eldin: *Moored Observations of Equatorward Transport in the Solomon Sea*

February 2018, Ocean Sciecenes Meeting, Portland, OR

Alberty, M., J. Sprintall, J. MacKinnon, A. Ganachaud, S. Cravatte, & C. Germineaud: *Spatial Patterns of Mixing in the Solomon Sea*

> May 2017, Solomon Sea Oceanography Workshop, Toulouse, France [plenary]
> June 2015, IUGG: IAPSO, Prague, Czech Republic
> April 2015, European Geosciences Union, Vienna, Austria [poster]
> November 2014, IMSPO, Ensenada, Mexico

WORKSHOPS AND SUMMER SCHOOLS

October 2022, Arctic Processes in CMIP6 Bootcamp, Holbk, Denmark [repository]
July 2022, CLIVAR Observing, Modeling, and Understanding the Circulation of the Arctic Ocean and Sub-Arctic Seas Workshop, Seattle, WA [poster]

HONORS AND AWARDS

NSF Ocean Sciences Postdoctoral Fellowship	*Dec 2021 - Dec 2023*
Wyer Family Fellowship	*Sep 2017 - Dec 2018*
NASA Earth and Space Fellowship	*Sep 2016 - Dec 2018*
Dr. John Roads Endowed Fellowship	*Sep 2015 - Aug 2016*
STEM Chateaubriand Fellow at Laboratoire dEtudes en	*Jan - Jul 2015*
Géophysique et Océanographie Spatiales (LEGOS), Toulouse, France	
UC Regents First-Year Fellowship, George Mitchell	*Sep 2012 - Aug 2013*
Fellowship & Arete Associates - Jacobs Fellowship	
Engineering Learning Initiatives Undergraduate Research Award	*Aug 2011 - May 2012*

TEACHING

Course Development, Lead Instructor Prison Teaching Initiative Topics in Justice Studies: Climate, the Environment, and Justice, (4 facilities) *Spring 2022*
Co-Instructor Prison Teaching Initiative MATH015 Beginning Mathematics, Garden State Youth Correctional Facility, Crosswicks, NJ, *Fall 2021*
Guest Lecturer GEO425 Introduction to Ocean Physics for Climate, Princeton University, *Fall 2019* (Lecture recording available on request)
Co-Instructor Prison Teaching Initiative MATH020 Elementary Algebra, Edna Mahan MAX, Clinton, NJ, *Fall 2019*

MENTORING

Undergraduate Students

Yi Jin Toh, Princeton University High Meadows Environmental Institute Environmental Internship Program, *Marine heatwaves and their impact on ocean biology*, Summer 2022 to present
Diana Montoya-Herrera, William M. Lapenta NOAA Student Internship Program at GFDL (remote), *Quantifying the impact of model resolution on the representation of marine heat waves*, Summer 2022
Macy Chang, William M. Lapenta NOAA Student Internship Program at GFDL (remote), *Investigating Future Change in Tropical Pacific Water Mass Pathways and Iron Transport in GFDL Ocean Models*, Summer 2021
Akira Disandro, Cooperative Institute for Modeling the Earth System (CIMES) Research Internship Program at Princeton University (remote), *Validating Tropical Pacific Circulation in GFDL Ocean Models*, Summer 2020

Graduate and Postdoctoral Advisors

Sonya Legg, Princeton University, Postdoctoral advisor
Janet Sprintall & Jennifer MacKinnon, Ph.D. advisors

SERVICE

Conference Chair

Gordon Research Seminar on Ocean Mixing, June 2022, South Hadley, MA

Reviewer

Geophysical Research Letters, Progress in Oceanography

Committee Member

· *2020-2021*: GFDL Diversity, Equity, and Inclusivity
· *2016*: SIO faculty search in polar sciences, student committee

Outreach

· *2021*: SACNAS NDiSTEM Student Application Reviewer, Mentor Judge, and Geo Futures Mentor
· *2021*: Organized the remote 2021 GFDL Summer Internship Program's mini lecture series and community slack channel
· *2021*: Science Monday volunteer with PS 205, Brooklyn
· *2021*: Unlearning Racism in Geosciences (URGE) Pod Member, Princeton AOS and NOAA GFDL pods
· *2020*: Organized the remote 2020 CIMES Summer Internship Program's mini lecture series, Pangeo Tutorial, and community slack channel
· *2019*: Young Women's Conference in Science, Technology, Engineering & Mathematics, Princeton Plasma Physics Laboratory
· *2014-2018*: Two Scientists Walk into a Bar, Reuben H. Fleet Science Center
· *2015-2018*: Rosa Parks Tutoring Program
· *2018*: Exploring Ocean STEM Careers Night, Birch Aquarium at Scripps Institution of Oceanography
· *2016-2017*: Beach Science program with Birch Aquarium

Membership

The Oceanography Society, MPOWIR, SACNAS, AGU

FIELD EXPERIENCE

2016: Small boat and kayak-based work observing frontal features, eddy formation and lake dynamics, Palau

2015: *ArcticMix*, small scale process-study, *R/V Sikuliaq*; Nome to Nome. PIs: Jennifer MacKinnon, Matthew Alford, and John Mickett

2014: *La Jolla Internal Tide experiment* (student-run cruise), *R/V Sproul*; San Diego to San Diego. Chief Scientist: Madeline Hamman

2014: *MoorSPICE*, mooring recovery and reployment cruise, *R/V Thomas G. Thompson*; Noumea to Noumea. PIs: Janet Sprintall and Sophie Cravatte

2012: *California Current Ecosystem* redeployment cruise, *R/V Ocean Starr*; Port Hueneme to Port Hueneme. PI: Uwe Send

2011-2012: Small boat work on Cayuga Lake, Ithaca, NY. Water quality monitoring, deployment and recovery of mooring temperature network, ADCP transects, met station maintenance. PIs: Tod Cowan and Seth Schweitzer

SKILLS

Programming & Modeling	Python, MATLAB, git, MITgcm
In-Situ Data Processing	Shipboard and wire walker CTD, SADCP/LADCP moored T/TP/CTD/ADCP

This CV was last updated November 14, 2022