

EDUCATION

- *Ph.D. Engineering Science* August 2015 - May 2020
Voiland College of Engineering and Architecture
Washington State University, Pullman, WA (Expected)
- *Bachelor of Science, Atmospheric Science* August 2010 – May 2015
Career Tracks: Graduate School Preparation, Climate Change, and Private Industry
Minors: Mathematics and Physics
Lyndon State College, Lyndonville, VT

RELEVANT EXPERIENCE

- Research Assistant September 2015 – Present
Washington State University
 - Working with data collected during the Norwegian Young Sea Ice (N-ICE) experiment to examine the surface energy balance over newly formed sea ice
 - Traveled to Summit Station, Greenland to complete instrument testing and calibrations
- Teaching Assistant September 2017 – May 2018
Washington State University
 - Helped to lead students working with atmospheric and water chemistry instruments in lab work in the Environmental Measurements course
 - Co-taught Engineering Ethics course
 - Provided both teaching and student support for Environmental Measurements, Engineering Ethics, and Intro to Environmental Engineering
- Plains Elevated Convection at Night (PECAN) Project Participant Summer 2015
The Center for Severe Weather Research
 - Worked on a mobile mesonet team in placing pods, launching radiosondes, and driving mesonet truck
 - Operated and drove the Doppler On Wheels radar
- Research Assistant 2014 – 2015
Vermont Low Income Trust for Electricity at Lyndon State College
 - Examined the impact of climate change on solar energy production in the Caledonia County, Vermont
- Research Experience for Undergraduate Summer Intern Summer 2014
Colorado State University CHILL Radar Research Group
 - Conducted a case study on a supercell in Denver, Colorado on May 21, 2014 to display the capabilities of the FRONT network in northern Colorado
- Supplemental Instructor 2013 – 2014
Lyndon State College
 - Tutored and organized study sessions for students taking Survey of Meteorology II, Climate Science, Statistics courses, and in the use of MATLAB
- Tutor 2012 – 2014
Lyndon State College
 - Provided one-on-one and group tutoring to students in atmospheric science, mathematics, physics, oceanography, and writing courses.
- Research Assistant Summer 2013
Lyndon State College
 - Studied climate change's impact on the tree line on Mount Washington, New Hampshire

PUBLICATIONS

- **Murphy, S. Y.**, V. P. Walden, S. R. Hudson, L. Cohen, R. Stillwell, 2019: Radiative Forcing by Arctic Clouds during the Norwegian Young Sea Ice (N-ICE2015) campaign. In preparation.
- Walden, V. P., S. R. Hudson, L. Cohen, **S. Y. Murphy**, and M. A. Granskog (2017), Atmospheric components of the surface energy budget over young sea ice: Results from the N-ICE2015 campaign, *J. Geophys. Res. Atmos.*, 122, 8427–8446, doi:10.1002/2016JD026091.
- Hanrahan, Janel, Maynard, Alex, **Murphy, Sarah Y.**, Zercher, Colton, Fitzpatrick, Allison (2017). Examining the Climatology of Shortwave Radiation in the Northeastern United States. *Journal of Applied Meteorology and Climatology*. 56. 10.1175/JAMC-D-16-0420.1.

CONFERENCE PRESENTATIONS

An Assessment of Polar WRF Microphysics and Boundary Layer Schemes using Data from the Norwegian Young Sea Ice Experiment

Sarah Y. Murphy, Von P. Walden, Stephen Hudson, Lana Cohen, Keith Hines

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| • Poster presentation at IEEE Women in Engineering Leadership Summit 2019 | July 2019 |
| • Oral Presentation at American Geophysics Union 2018 Fall Meeting | December 2018 |
| • Poster Presentation at American Meteorological Society 15th Conference on Cloud Physics/
15th Conference on Atmospheric Radiation | July 2018 |

Cloud Radiative Forcing During the N-ICE2015 Experiment

Sarah Murphy, Von P. Walden, Lana Cohen, Stephen Hudson

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| • Oral Presentation at American Geophysical Union 2017 Fall Meeting | December 2017 |
| • Poster presentation at the Gordon Research Conference on Radiation and Climate | July 2017 |
| • Oral presentation at the 98th American Meteorological Society Annual Meeting | January 2017 |
| • Poster presentation at the American Geophysical Union 2016 Fall Meeting | December 2016 |
| • Poster presentation at the Connaught Summer Institute in Arctic Science: Atmosphere,
Cryosphere, and Climate | July 2016 |

Examining the Climatology of Solar Energy Potential in Vermont

Sarah Murphy, Janel Hanrahan

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| • Oral presentation at the Vermont Weather & Energy Analytics Project Weather Team Meeting
at IBM TJ Watson Research Center | May 2015 |
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Observational Capabilities of the FRONT Network: 21 May 2014 Case

Sarah Murphy, Julie Barnum, Pat Kennedy, Dr. V. Chandrasekhar

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| • Oral presentation at the Lyndon State College Experiential Learning and Internship Exhibition | April 2015 |
| • Poster presentation at the Lyndon State College Experiential Learning and Internship
Exhibition | April 2015 |
| • Poster presentation at the 50th Northeastern Storm Conference | March 2015 |
| • Poster presentation at the 95th American Meteorological Society Annual Meeting | January 2015 |
| • Poster presentation at the 14th Annual American Meteorological Society Student Conference | January 2015 |

SKILLS

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|------------------|--------------------------------------|--------|-------------------------------------|
| • MATLAB | • Vaisala DigiCORA Radiosonde System | • Unix | • FORTRAN |
| • Python | • GRAWMET 5 Radiosonde System | • HTML | • Doppler on Wheels Radar Operation |
| • Linear Algebra | • Differential Equations | | • ArcGIS Spatial Analysis |

MEMBERSHIPS

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| American Meteorological Society | 2013 – Present |
| American Geophysical Union | 2014 – Present |

Association of Polar Early Career Scientists

2016 – Present

AWARDS AND DISTINCTIONS

- Washington State University Andy Studebaker Scholarship December 2018
- Washington State University Paul A. Weir Scholarship May 2017
- Washington State University David E. Harsch Memorial Award May 2016
- First Place Poster Presenter in Joint EIPT&R2O Conference Student Competition at the 95th AMS 2015 Annual Meeting for “Observational Capabilities of the FRONT Network: 21 May 2014 Case” January 2015
- Lyndon State College Alumni Scholarship Endowment 2014 – 2015
- Lyndon State College Faculty and Staff Scholarship Endowment Fund Recipient 2014 – 2015
- Lyndon State College Deans List Recipient Fall 2014, Spring 2014, Spring 2015

COLLEGE AND COMMUNITY INVOLVEMENT

- Data and Software Carpentry Certified Instructor 2018 – Present
Instructed and assisted in organization and student engagement during several Data and Software carpentry workshops at Washington State University. Primary instructor focus in Python programming but also involved with unix and other episodes.
- Whitman County Humane Society Volunteer 2018 – Present
Cleaned, provided care for, and socialized cats, dogs, and exotic animals. Fostered and socialized stray cats as they were prepared for adoption.
- Co-Coordinator of the Lyndon State College Weather Balloon Launch Team 2013 – 2015
Collected data from balloon launches using Vaisala DigiCORA sounding system and lead a group of students in launching weather balloons
- Historian - Lyndon State College Student Chapter of the American Meteorological Society and National Weather Association 2012 – 2015
Kept track of the history of the chapter and assisted in planning the 38th, 39th, and 40th annual Northeastern Storm Conference
- Lyndon State College Student Ambassador 2014 – 2015
Gave tours to perspective students and helped to run admissions events on campus
- Panelist at Women in Science and Technology Conference April 2014
Spoke to young women at White Mountain Community College about pursuing a career in the sciences
- Lyndon State College Student Government Association Elected Class Representative 2013 – 2015
Represented the class of 2015 in the Lyndon State College student government by voting on issues concerning the student body
- Lyndon State College Weather Camp Student Volunteer August 2013
Assisted in the organization and in running a weather camp for students in 7th – 9th grades