

Nicholas E. Johnson

University at Albany – State University of New York
Department of Atmospheric and Environmental Sciences
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Education

Ph.D. Atmospheric Science (<i>in progress</i>)	August 2020 – Present
University at Albany, State University of New York	
Advisors: Kristen Corbosiero and Brian Tang	
B.S. Earth System Science, Summa Cum Laude, Honors College Diploma	April 2020

University of Alabama in Huntsville (UAH)

Thesis: *Estimating Surface Wind Speed in Tropical Cyclones through Integration of NOAA Hurricane Hunter Aircraft Observations*

Research Experience

Research Assistant August 2020 – Present
Department of Atmospheric and Environmental Sciences, University at Albany
Advisors: Kristen Corbosiero and Brian Tang

Undergraduate Researcher August 2019 – May 2020
NASA Short-term Prediction Research and Transition Center (SPoRT)
Advisors: Patrick Duran and Emily Berndt

Student Intern (NOAA Hollings Program) Summer 2019
NOAA AOML Hurricane Research Division
Project Title: *Development of Real-Time Visualizations and Research Tools through Integration of NOAA Hurricane Hunter Aircraft Data*
Advisor: Jonathan Zawislak

Undergraduate Researcher Summer 2018
UAH Honors Capstone Research Program
Project Title: *Abrupt Changes in Wind Conditions at the Memphis International Airport*
Advisor: Lawrence Carey and Thomas Salem

Student Volunteer Summer 2017
National Weather Service Weather Forecast Office, Memphis, TN
Project Title: *Fog Formation affecting Visibility at the Memphis International Airport*
Advisor: Thomas Salem

Field Experience

NASA Convective Processes Experiment – Cabo Verde (CPEX-CV) September 2022
Sal Island, Cabo Verde

NOAA NSSL VORTEX Southeast March 2017 – May 2019
Alabama, USA

Honors and Awards

NOAA Hollings Scholar	2018-2020
UAH Department of Atmospheric and Earth Science Achievement Award	Spring 2020
University of Alabama System Honors Research Conference	November 2018
2 nd Place Poster Presentation	
Frank G. Brewer, Sr. Civil Air Patrol Memorial Aerospace Award	April 2017

Journal Publications

- Johnson, N. E.**, B. H. Tang, K. L. Corbosiero, and H. Vömel, 2025: A Comparison of Methods for Estimating Vertical Wind from Dropsondes. *J. Atmos. Oceanic Tech.*, submitted.
- Johnson, N. E.**, B. H. Tang, K. L. Corbosiero, and J. R. Moskaitis, 2025: Observed downdrafts and ventilation during the rapid intensity changes of Hurricane Delta (2020). *J. Geophys. Res. Atmos.*, 130 (10), e2024JD042 915.
- Duran, P., C. J. Schultz, E. C. Bruning, S. N. Stevenson, D. J. PeQueen, **N. E. Johnson**, et al., 2021: The evolution of lightning flash density, flash size, and flash energy during Hurricane Dorian's (2019) intensification and weakening. *Geophysical Research Letters*, 48, e2020GL092067.

Oral Presentations

- Johnson, N. E.**, B. Tang, K. Corbosiero, and J. Moskaitis: A Comparison of Methods for Estimating Vertical Wind from Dropsondes. *11th Northeast Tropical Workshop*. Albany, NY, August 2025.
- Johnson, N. E.**, B. Tang, K. Corbosiero, and J. Moskaitis: Observed downdrafts and ventilation during the rapid weakening of Hurricane Delta (2020). *20th Cyclone Workshop*. St. Sauveur, QB, Canada, October 2024.
- Johnson, N. E.**, B. Tang, K. Corbosiero, J. Moskaitis, and Y. Jin: An analysis of the unexpected weakening of Hurricane Delta (2020) using COAMPS-TC and aircraft observations. *36th AMS Conference on Hurricanes and Tropical Meteorology*, Long Beach, CA, May 2024.
- Johnson, N. E.**, B. Tang, K. Corbosiero: Measuring Ventilation in Tropical Cyclones using Aerial Reconnaissance Observations. *35th Conference on Hurricanes and Tropical Meteorology*, New Orleans, LA, May 2022.
- Johnson, N. E.** and J. Zawislak: Development of Real-Time Visualizations and Research Tools through Integration of NOAA Hurricane Hunter Aircraft Data. *100th American Meteorological Society Annual Meeting*, Boston, MA, January 2020.

Poster Presentations

- Johnson, N. E.**, J. Dunion, E. Duran, P. Duran, E. Berndt: Adaption of the SHARPpy Sounding Analysis Toolkit for Tropical Cyclone Applications. *34th Conference on Hurricanes and Tropical Meteorology*, Virtual, May 2021.
- Johnson, N. E.**, E. Duran, P. Duran, J. Dunion: Visualizing Atmospheric Soundings in Tropical Cyclones. *NASA MSFC Science, Technology, and Engineering Jamboree*, Huntsville, AL, February 2020.
- Holbach, H., **N. Johnson**, J. Zawislak, S. de Solo: Observing Tropical Cyclones from the Sky. *100th American Geophysical Union Annual Meeting*, San Francisco, CA, December 2019.

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Johnson, N. E. and L. D. Carey: Abrupt Changes in Wind Conditions at the Memphis International Airport. *99th American Meteorological Society Annual Meeting*, Phoenix, AZ, January 2019.