

Dan Wu

Sr. Research Associate II (CIMAS & NOAA)

Current affiliation: Cooperative Institute for Marine and Atmospheric Studies at
University of Miami & NOAA/AOML/Hurricane Research
Division

Work address: NOAA/AOML/Hurricane Research Division
4301 Rickenbacker Causeway, Miami, FL 33149

Email: dan.wu@noaa.gov

EDUCATION

2019, **Ph.D. in Atmospheric Science**

School of Atmospheric Science, Nanjing University, China

2011, **M.S. in Meteorology**

School of Atmospheric Science, Nanjing University, China

2008, **B.S. in Atmospheric Science**

Department of Atmospheric Science, Nanjing University, China

Apr 2018 – Mar 2019, **Visiting Scholar**

Pennsylvania State University, Pennsylvania

RESEARCH INTERESTS

Tropical cyclone structure and precipitation

Polarimetric radar observations

Model physics evaluation

Hurricane data assimilation and modeling

RESEARCH EXPERIENCE

04/19/2021-present, **Senior Research Associate II**

Cooperative Institute for Marine and Atmospheric Studies &
NOAA/AOML/Hurricane Research Division, Miami, FL

Aug 2014-Mar 2021, **Assistant Researcher**

Shanghai Typhoon Institute, China

Aug 2011-Aug 2014, **Intern Researcher**

Shanghai Typhoon Institute, China

REFEREED PUBLICATIONS

1. **Wu D.**, F. Zhang, and coauthors, 2021: Evaluation of Microphysics Schemes in Tropical Cyclones using Polarimetric Radar Observations: Convective Precipitation in an Outer Rainband, *Mon. Wea. Rev.*, 149(4), 1055-1068.
2. Bao, X., L. Wu, S. Zhang, Q. Li, L. Lin, B. Zhao, **D. Wu**, W. Xia, B. Xu, 2020: Distinct raindrop size distributions of convective inner- and outer- rainband rain in Typhoon Maria (2018). *J. Geophys. Res.*, **125**, e2020JD032482.
3. Zhang, X., J. Tang, C. Wu, and **D. Wu**, 2020: An observational study of the inner core structure of Typhoon Meranti (2016) near landfall. *Atmos. Sci. Lett.*, **21**, e962.
4. Bao, X., L. Wu, B. Tang, L. Ma, **D. Wu**, and coauthors, 2019: Variable Raindrop Size Distributions in Different Rainbands Associated with Typhoon Fitow (2013). *J. Geophys. Res.*, **124**, 12262-12281.
5. **Wu D.**, K. Zhao, M. Kumjian, X. Chen, and coauthors, 2018: Kinematics and Microphysics of Convection in the Outer Rainband of Typhoon Nida (2016) revealed by Polarimetric Radar. *Mon. Wea. Rev.*, **146**, 2147-2159.
6. Chen, X., Y. Wang, K. Zhao, and **D. Wu**, 2017: A numerical study on rapid intensification of Typhoon Vicente (2012) in the South China Sea. Part I: Verification of simulation, storm-scale evolution and environmental contribution. *Mon. Wea. Rev.*, **145**, 877-898.
7. Bao, X., **D. Wu**, X. Lei, L. Ma, D. Wang, K. Zhao, and B. Jou, 2017: Improving the Extreme Rainfall Forecast of Typhoon Morakot (2009) by Assimilating Radar Data from Taiwan Island and Mainland China. *J. Meteor. Res.*, **31(4)**, 747-766.
8. **Wu D.**, K. Zhao, B. Jou, W. Lee, 2013: Radar Observation of Precipitation Asymmetries in Tropical Cyclones Making Landfall on East China Coast[J]. *Tropical Cyclone Research and Review*, **2(2)**, 81-95.
9. Wang M., K. Zhao, **D. Wu**, 2011: The T-TREC Technique for Retrieving the Winds of Landfalling Typhoons in China. *Acta. Meteor. Sinica.*, **25(1)**, 91-103.
10. **Wu D.**, K. Zhao, H. Yu, M. Wang, 2010: An analysis of spatial and temporal variation in the axisymmetric precipitation structure associated with typhoons making landfall on the southeastern coast of China based on the Doppler radar data (in Chinese). *Acta. Meteor. Sinica.*, **68(6)**, 896-907.

CONFERENCES AND SEMINARS

- 2023 Improvements in the Assimilation of Tropical Cyclone Inner-core Observations in NOAA's Next-Generation Hurricane Analysis and Forecast System (HAFS) (invited)
103rd American Meteorological Society Annual Meeting, Denver, CO, US

- 2018 Evaluation of Microphysics Schemes in Tropical Cyclone Simulations using Polarimetric Radar Observations: Convective Precipitation in Outer Rainband (invited)
Pennsylvania State University, US
- 2018 Kinematics and Microphysics of Convection in the Outer Rainband of Typhoon Nida (2016) revealed by Polarimetric Radar (invited)
33rd Conference on Hurricanes and Tropical Meteorology, Ponte Vedra, US
- 2015 Intensity Change of Typhoon Vicente (2012) During its Landfall Based on Ground-based Radar Observations (Poster)
National Workshop on Tropical Cyclones (NWTC-XVII), Xiamen, China
- 2015 Radar Observation of Precipitation Asymmetries in Tropical Cyclones Making Landfall on East China Coast (invited)
The 8th China-Korea Joint Workshop on Tropical Cyclones, Shanghai, China