

**Dr. David J. Delene** (ORCID iD: <https://orcid.org/0000-0002-3733-6021>)  
Research Professor and Aerospace Research Fellow, University of North Dakota

### **A. Professional Preparation**

University of Wyoming, Laramie, WY	Atmospheric Sciences	Ph.D. 1998
Michigan Technological University, Houghton, MI	Geophysics	M.S. 1995
Michigan Technological University, Houghton, MI	Applied Physics	B.S. 1993

### **B. Appointments**

2023 - present Aerospace Research Fellow, University of North Dakota, John D. Odegard School of Aerospace Sciences, Grand Forks, ND, United States

2019 – Present Research Professor in the Department of Atmospheric Science, University of North Dakota, Grand Forks, ND.

2011 – 2019 Associate Research Professor in the Department of Atmospheric Science, University of North Dakota, Grand Forks, ND.

2002 – 2011 Assistant Research Professor in the Department of Atmospheric Science, University of North Dakota, Grand Forks, ND.

2001 – 2002 Scientific Computing Research Associate at the John D. Odegard School of Aerospace Sciences, Grand Forks, ND.

1999 – 2001 Research Associate at the Cooperative Institute for Research in Environmental Sciences, Boulder, CO.

1995 – 1998 Research Assistantship in the Department of Atmospheric Science, University of Wyoming, Laramie, WY.

1994 - 1995 Research Assistantship Department of Geological Engineering and Science, Michigan Technological University, Houghton, MI.

Summer 1994 Internship at Science Applications International Corporation, Hampton, VA.

### **C. Products**

#### *Products Most Closely Related to the Proposed Project (Maximum of Five)*

Gapp N, Delene D, Schmidt J, Harasti P. Comparison of Concurrent Radar and Aircraft Measurements in Florida Thunderstorm Cirrus Anvils. *Journal of the Atmospheric Sciences*. 2025 January 01; 82(aop):15-176. Available from: <https://journals.ametsoc.org/view/journals/atsc/aop/JAS-D-24-0014.1/JAS-D-24-0014.1.xml>  
DOI: 10.1175/JAS-D-24-0014.1

Skow, Andrea, Michael Poellot, David Delene, Mark Askelson, Kirk North, K., and Mariko Oue, A Multi-Platform, In-Situ Kinematic and Microphysical Analysis of a Hybrid Parallel/Trailing Stratiform Mesoscale Convective System, *Monthly Weather Review*, 150 (4), 927-948 2022, <https://doi.org/10.1175/MWR-D-21-0009.1>.

Schmidt, Jerome M., Piotr J. Flatau, Paul R. Harasti, Robert D. Yates, David J. Delene, Nicholas J. Gapp, William J. Kohri, Jerome R. Vetter, Jason E. Nachamkin, Joshua D. Hoover, Mark J. Anderson; Seth Green, and James E. Bennett, Radar Detection of Individual Raindrops, *Bulletin of the American Meteorological Society*, 2019.

Delene, David J., Kurt Hibert, Michael Poellot, and Neil Brackin, The North Dakota Citation Research Aircraft Measurement Platform, 2019 SAE International Conference on Icing of Aircraft, Engines, and Structures, Paper 2019-01-1990, 2019, doi: 10.4271/2019-01-1990.

Delene, D. J., Aircraft Data Processing and Analysis Software Package, Earth Science Informatics, 1-16, 2011, URL: <http://dx.doi.org/10.1007/s12145-010-0061-4>, DOI: 10.1007/s12145-010-0061-4.

#### *Other Significant Products*

Gupta, Siddhant, Greg M. McFarquhar, Joseph R. O'Brien, David J. Delene, Michael R. Poellot, Amie Dobracki, James R. Podolske, Jens Redemann, Samuel E. LeBlanc, Michal Segal-Rozenhaimer, and Kristina Pistone, Impact of the Variability in Vertical Separation between Biomass-Burning Aerosols and Marine Stratocumulus on Cloud Microphysical Properties over the Southeast Atlantic, *Atmospheric Chemistry and Physics*, 21, 4615-4635, 2021, <https://doi.org/10.5194/acp-21-4615-2021>.

Dunnavan, Edwin Lee, Jacob Carlin, Jiayi Hu, Petar Bukovic, Alexander Ryzhkov, Greg McFarquhar, Joseph Finlon, Sergey Matrosov, David Delene, Radar Retrieval Evaluation and Investigation of Dendritic Growth Layer Polarimetric Signatures in a Winter Storm, *Journal of Applied Meteorology and Climatology*, Published Online Ahead of Print 2022, Accessed Aug 23, 2022, <https://doi.org/10.1175/JAMC-D-21-0220.1>.

Tuftedal, Matthew, David J. Delene and Andrew Detwiler, Precipitation Evaluation of the North Dakota Cloud Modification Project (NDCMP) using Rain Gauge Observations, *Atmospheric Research*, 2022, <https://doi.org/10.1016/j.atmosres.2021.105996>.

Nespor, Brett, Richard Cochran, Haewoo Jeong, Frank Bowman, David Delene, Evgenii Kozliak, and Alena Kubatova, Occurrence of both Nonvolatile and Volatile Carbonaceous Air Particulate Markers using Thermal Desorption-Pyrolysis-Gas Spectrometer, *Atmospheric Environment*, 2020, <https://doi.org/10.1016/j.atmosenv.2020.118058>.

Delene, D. J., Suitability of North Dakota for Conducting Effective Hygroscopic Seeding, *Journal of Weather Modification*, 48, 43-67, 2016, URL: <http://www.weathermodification.org/publications/index.php/JWM/article/view/549>.

Delene, D. J., and J. A. Ogren, Variability of aerosol optical properties at four North American surface monitoring sites, *Journal of Atmospheric Sciences*, 59, 1135-1150, 2002.

Delene, D. J. and T. Deshler, Vertical profiles of cloud condensation nuclei above Wyoming, *Journal of Geophysical Research - Atmospheres*, 106, 12579-12588, 2001.

Delene, D. J., W. I. Rose, and N. C. Grody, Remote sensing of volcanic ash clouds using special sensor microwave imager data, *Journal of Geophysical Research - Solid Earth*, 101, 11,579-11,588, 1996.

Rose, W. I., D. J. Delene, D. J. Schneider, G. J. S. Bluth, A. J. Krueger, I. Sprod, C. McKee, H. L. Davies, and G. G. J. Ernst, Ice in the 1994 Rabaul eruption cloud: implications for volcano hazard and atmospheric effects, *Nature*, 375, 477-479, 1995.

#### **Synergistic Activities (Maximum of Five Examples)**

- Atmospheric Sciences Information Technology Committee Chair (2003 – Present).
- Lead airborne scientist for the CAPE field projects to study Florida Thunderstorms and for the Polarimetric Cloud Analysis and Seeding Test (POLCAST) set of Weather Modification field projects.
- Co-organizer of 2017 EUFAR/ICCP/IUGG/IAMAS Expert Workshop on Processing of Cloud Particle Measurements, 7-9 July 2017, Oberpfaffenhofen, Germany.
- Editor of the *Journal of Weather Modification*, 2012 – 2021.
- Lead administrator of the Airborne Data Processing and Analysis (ADPAA) Software Gateway.