

**IDENTIFYING INFORMATION:**

NAME: Delene, David James

PERSISTENT IDENTIFIER (PID): <https://orcid.org/0000-0002-3733-6021>

POSITION TITLE: Research Professor and Aerospace Research Fellow

PRIMARY ORGANIZATION AND LOCATION: University of North Dakota, Department of Atmospheric Sciences, Grand Forks, ND, United States

**Professional Preparation:**

| ORGANIZATION AND LOCATION                                         | DEGREE<br>(if applicable) | RECEIPT DATE         | FIELD OF STUDY       |
|-------------------------------------------------------------------|---------------------------|----------------------|----------------------|
| University of Wyoming, Laramie, WY,<br>United States              | PHD                       | 09/1995 -<br>12/1998 | Atmospheric Sciences |
| Michigan Technological University,<br>Houghton, MI, United States | MS                        | 09/1993 -<br>08/1995 | Geophysics           |
| Michigan Technological University,<br>Houghton, MI, United States | BS                        | 09/1989 -<br>05/1993 | Applied Physics      |

**Appointments and Positions**

|                |                                                                                                                                                   |
|----------------|---------------------------------------------------------------------------------------------------------------------------------------------------|
| 2023 - present | Research Professor and Aerospace Research Fellow, University of North Dakota, Department of Atmospheric Sciences, Grand Forks, ND, United States  |
| 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, University of North Dakota, Grand Forks, North Dakota, United States                                                          |
| 2014 - present | President, Open Science Associates, LLC, East Grand Forks, MN, United States                                                                      |
| 2011 - 2019    | Associate Research Professor, University of North Dakota, Department of Atmospheric Sciences, Grand Forks, ND, United States                      |
| 2002 - 2011    | Assistant Research Professor, University of North Dakota, Department of Atmospheric Sciences, Grand Forks, ND, United States                      |
| 2001 - 2002    | Scientific Computing Research Associate, University of North Dakota, John D. Odegard School of Aerospace Sciences, Grand Forks, ND, United States |
| 1999 - 2001    | Research Associate, Cooperative Institute for Research in Environmental Sciences, Boulder, CO, United States                                      |

**Products**

1. Nairy C, Delene D, Finlon J, Yorks J, Järvinen E, Schnaiter M, Walker McLinden M, Heymsfield A, Detwiler A, McMurdie L. In Situ Observations of Ice Crystal Chain Aggregates in Winter Storms. Geophysical Research Letters. 2026 January 11; 53(1):- . Available from: <https://agupubs.onlinelibrary.wiley.com/doi/10.1029/2025GL118365> DOI: 10.1029/2025GL118365
2. Finlon J, Yorks J, Wagner S, Nairy C, Selmer P, Nowotnick E, Delene D, McMurdie L.

- Influence of Cloud Microphysical Properties on Airborne Lidar Measurements: Results From the IMPACTS Field Campaign. *Journal of Geophysical Research: Atmospheres*. 2025 November 26; 130(23):- . Available from: <https://agupubs.onlinelibrary.wiley.com/doi/10.1029/2025JD044591> DOI: 10.1029/2025JD044591
3. 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
  4. Schmidt J, Flatau P, Harasti P, Yates R, Delene D, Gapp N, Kohri W, Vetter J, Nachamkin J, Parent M, Hoover J, Anderson M, Green S, Bennett J. Radar Detection of Individual Raindrops. *Bulletin of the American Meteorological Society*. 2019 December 01; 100(12):2433-2450. Available from: <https://journals.ametsoc.org/bams/article/100/12/2433/344452/Radar-Detection-of-Individual-Raindrops> DOI: 10.1175/BAMS-D-18-0130.1
  5. Delene D. Airborne data processing and analysis software package. *Earth Science Informatics*. 2011 March 01; 4(1):29-44. Available from: <http://link.springer.com/article/10.1007/s12145-010-0061-4> DOI: 10.1007/s12145-010-0061-4
  6. Skow A, Poellot M, Delene D, Askelson M, North K, Oue M. A Multi-Platform, In-Situ Kinematic and Microphysical Analysis of a Hybrid Parallel/Trailing Stratiform Mesoscale Convective System. *Monthly Weather Review*. 2022 February 01; -1(aop). Available from: <https://journals.ametsoc.org/view/journals/mwre/aop/MWR-D-21-0009.1/MWR-D-21-0009.1.xml> DOI: 10.1175/MWR-D-21-0009.1
  7. Wagner SW, Delene DJ. Technique for comparison of backscatter coefficients derived from in-situ cloud probe measurements with concurrent airborne Lidar. *Atmospheric Measurement Techniques*. 2022 November 11; 15(21):6447-6466. Available from: <https://doi.org/10.5194/amt-15-6447-2022>
  8. Delene D, Hibert K, Poellot M, Brackin N. The North Dakota Citation Research Aircraft Measurement Platform. Warrendale, PA: [www.sae.org](http://www.sae.org); 2019 June. Available from: <https://www.sae.org/publications/technical-papers/content/2019-01-1990/> isbn: 2019-01-1990
  9. Gultepe E, Wang S, Blomquist B, Fernando H, Kreidl O, Delene D, Gultepe I. Machine learning analysis and nowcasting of marine fog visibility using FATIMA Grand Banks campaign measurements. *Frontiers in Earth Science*. 2024 February 07; 11. Available from: <https://www.frontiersin.org/articles/10.3389/feart.2023.1321422> PMID: 2296-6463
  10. Schima J, McFarquhar G, Delene D, Heymsfield A, Bansemer A, Schnaiter M, Finlon J, Järvinen E, Nehlert F. A Multi-Probe Automated Classification of Ice Crystal Habits During the IMPACTS Campaign. *Journal of Geophysical Research: Atmospheres*. 2024; 129(22):e2024JD040895. Available from: <https://onlinelibrary.wiley.com/doi/abs/10.1029/2024JD040895> DOI: 10.1029/2024JD040895
  11. Varcie M, Zaremba T, Rauber R, McFarquhar G, Finlon J, McMurdie L, Ryzhkov A, Schnaiter M, Järvinen E, Waitz F, Delene D, Poellot M, McLinden M, Janiszeski A. Precipitation Growth Processes in the Comma-Head Region of the 7 February 2020 Northeast Snowstorm: Results

- from IMPACTS. *Journal of the Atmospheric Sciences*. 2022 December 13; 80(1):3-29. Available from: <https://journals.ametsoc.org/view/journals/atsc/80/1/JAS-D-22-0118.1.xml> DOI: 10.1175/JAS-D-22-0118.1
12. Gupta S, McFarquhar G, O'Brien J, Poellot M, Delene D, Chang I, Gao L, Xu F, Redemann J. In situ and satellite-based estimates of cloud properties and aerosol–cloud interactions over the southeast Atlantic Ocean. *Atmospheric Chemistry and Physics*. 2022 October 07; 22(19):12923-12943. Available from: <https://acp.copernicus.org/articles/22/12923/2022/> DOI: 10.5194/acp-22-12923-2022
  13. Osmani I, Ojo V, Roadifer L, Nairy C, Kennedy A, Delene D, Chelmo H, Bhatnagar S, Gao Y, J. Lavalley J, Shelby M, Hostetler E, Leight M, Jewell J. Investigating Atmospheric Ice Crystal Formation and Their Impacts on Hypersonic Vehicles. AIAA SCITECH 2025 Forum [Internet] American Institute of Aeronautics and Astronautics; 2025. Available from: <https://doi.org/10.2514/6.2025-1328> DOI: doi:10.2514/6.2025-1328
  14. Järvinen E, van Diedenhoven B, Magee N, Neshyba S, Schnaiter M, Xu G, Jourdan O, Delene D, Waitz F, Lolli S, Kato S. Ice Crystal Complexity and Link to the Cirrus Cloud Radiative Effect. *Clouds and Their Climatic Impacts* [Internet] Wiley Online Library; 2023///. 47-85p. Available from: <https://onlinelibrary.wiley.com/doi/abs/10.1002/9781119700357.ch3> isbn: 978-1-119-70035-7
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  16. Barrett P, Abel S, Coe H, Crawford I, Dobracki A, Haywood J, Howell S, Jones A, Langridge J, McFarquhar G, Nott G, Price H, Redemann J, Shinozuka Y, Szpek K, Taylor J, Wood R, Wu H, Zuidema P, Bauguitte S, Bennett R, Bower K, Chen H, Cochrane S, Cotterell M, Davies N, Delene D, Flynn C, Freedman A, Freitag S, Gupta S, Noone D, Onasch T, Podolske J, Poellot M, Schmidt S, Springston S, Sedlacek III A, Trembath J, Vance A, Zawadowicz M, Zhang J. Intercomparison of airborne and surface-based measurements during the CLARIFY, ORACLES and LASIC field experiments. *Atmospheric Measurement Techniques*. 2022 November 03; 15(21):6329-6371. Available from: <https://amt.copernicus.org/articles/15/6329/2022/> DOI: 10.5194/amt-15-6329-2022
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- Delene D. Radar Retrieval Evaluation and Investigation of Dendritic Growth Layer Polarimetric Signatures in a Winter Storm. *Journal of Applied Meteorology and Climatology*. 2022 July 15; -1(aop). Available from: <https://journals.ametsoc.org/view/journals/apme/aop/JAMC-D-21-0220.1/JAMC-D-21-0220.1.xml> DOI: 10.1175/JAMC-D-21-0220.1
19. Tuftedal M, Delene D, Detwiler A. Precipitation evaluation of the North Dakota Cloud Modification Project (NDCMP) using rain gauge observations. *Atmospheric Research*. 2022 May 01; 269:105996. Available from: <https://www.sciencedirect.com/science/article/pii/S0169809521005524> DOI: 10.1016/j.atmosres.2021.105996
  20. Gupta S, McFarquhar G, O'Brien J, Poellot M, Delene D, Miller R, Small Griswold J. Factors affecting precipitation formation and precipitation susceptibility of marine stratocumulus with variable above- and below-cloud aerosol concentrations over the Southeast Atlantic. *Atmospheric Chemistry and Physics*. 2022 March 02; 22(4):2769-2793. Available from: <https://acp.copernicus.org/articles/22/2769/2022/> DOI: 10.5194/acp-22-2769-2022
  21. Gupta S, McFarquhar G, O'Brien J, Delene D, Poellot M, Dobracki A, Podolske J, Redemann J, LeBlanc S, Segal-Rozenhaimer M, Pistone K. 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*. 2021 March 25; 21(6):4615-4635. Available from: <https://acp.copernicus.org/articles/21/4615/2021/> DOI: 10.5194/acp-21-4615-2021
  22. Nespor B, Cochran R, Jeong H, Bowman F, Delene D, Kozliak E, Kubátová A. Occurrence of both nonvolatile and semivolatile carbonaceous air particulate markers using thermal desorption-pyrolysis-gas chromatography-mass spectrometry. *Atmospheric Environment*. 2021 February 01; 246:118058. Available from: <https://www.sciencedirect.com/science/article/pii/S1352231020307901> DOI: 10.1016/j.atmosenv.2020.118058
  23. Delene D. Suitability of North Dakota for Conducting Effective Hygroscopic Seeding. *The Journal of Weather Modification*. 2016 April 30; 48(1):43-67. Available from: <http://www.weathermodification.org/~weatherm/publications/index.php/JWM/article/view/549> issn: 0739-1781
  24. Delene D, Grainger C, Kucera P, Langerud D, Ham M, Mitchell R, Kruse C. The Second Polarimetric Cloud Analysis and Seeding Test. *Journal of Weather Modification*. 2011 April 01; 43(1):14-28. Available from: <http://www.weathermodification.org/publications/index.php/JWM/article/viewArticle/147>
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  26. Delene D, Deshler T. Vertical profiles of cloud condensation nuclei above Wyoming. *Journal of Geophysical Research: Atmospheres*. 2001; 106(D12):12579-12588. Available from: <http://onlinelibrary.wiley.com/doi/10.1029/2000JD900800/abstract> DOI:

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27. Sheridan P, Delene D, Ogren J. Four years of continuous surface aerosol measurements from the Department of Energy's Atmospheric Radiation Measurement Program Southern Great Plains Cloud and Radiation Testbed site. *Journal of Geophysical Research: Atmospheres*. 2001 September 27; 106(D18):20735-20747. Available from: <http://onlinelibrary.wiley.com/doi/10.1029/2001JD000785/abstract> DOI: 10.1029/2001JD000785
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30. Delene D, Rose W, Grody N. Remote sensing of volcanic ash clouds using special sensor microwave imager data. *Journal of Geophysical Research: Solid Earth*. 1996 May 10; 101(B5):11579-11588. Available from: <http://onlinelibrary.wiley.com/doi/10.1029/96JB00643/abstract> DOI: 10.1029/96JB00643
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**Certification:**

I certify that the information provided is current, accurate, and complete. This includes but is not limited to current, pending, and other support (both foreign and domestic) as defined in 42 U.S.C. § 6605.

I also certify that, at the time of submission, I am not a party to a malign foreign talent recruitment program.

Misrepresentations and/or omissions may be subject to prosecution and liability pursuant to, but not limited to, 18 U.S.C. §§ 287, 1001, 1031 and 31 U.S.C. §§ 3729-3733 and 3802.

Certified by Delene, David James in SciENcv on 2026-07-08 09:33:02