

Talks, Presentations, and Posters:

2020

Nairy, Christian, Delene, David J. and Emma Jarvinen, *Observations of Chain Aggregates in Florida Cirrus Cloud Anvils*, Online Presentation in Cirrus in the Tropical Upper Troposphere/Lower Stratosphere (A042) at the 2020 American Geophysical Union meeting.

Nairy, Christian, Detwiler, Andrew G., David J. Delene, *Radar and Airborne Observations in Florida Thunderstorm Anvils*, [Virtual presentation \(AE010-07\)](#) given at the American Geophysical Union (AGU) Fall 2020 Meeting on December 10, 2020 at 07:54-07:58 Central (CT).

Delene, David J. and **Christian Nairy**, Emma Jarvinen, and Martin Schnaiter, *Observations of Chain Aggregates in Florida Cirrus Cloud Anvils*, Talk and Poster at the International Conference on Clouds and Precipitation 2020 in Pune, India on August 3rd-7th, 2020. – CANCELED DUE TO COVID-19

Nairy, Christian, Delene, David J. and Emma Järvinen, *Observations of Chain Aggregates in Florida Cirrus Cloud Anvils*, Online Presentation at the 5th Semiannual ADPAA Developers Conference, August 17th, 2020.

2021

Nairy, Christian, David J. Delene, Andrew Detwiler, *Observations of Chain Aggregates in Florida Cirrus Cloud Anvils during the CapeEx19 Field Campaign*, Virtual presentation given at the American Geophysical Union (AGU) Fall 2021 Meeting on 13 December 2021.

2022

Delene, David J., Jennifer Moore, **Christian Nairy**, Nicholas Camp, and Marwa Majdi, *IMPACTS 2022 Cloud Probes – Science*, Presentation given (10:45 am MST) at the 2022 IMPACTS Science Team Meeting, 26 July 2022.

Delene, David J., Jennifer Moore, **Christian Nairy**, and Michael Willette, *IMPACTS 2022 Cloud Probes – Instruments*, Presentation given (10:10 am MST) at the 2022 IMPACTS Science Team Meeting, 27 July 2022.

Delene, David J., **Christian Nairy**, Aaron Bansemer, Andrew Detwiler, Greg McFarquhar, and Andrew Heymsfield. *Particle Shattering Analysis of Airborne Microphysical Probes Using IMPACTS Observations*, Presentation given (3:00 pm CST) at the 16th American Meteorological Society Conference on Cloud Physics, 11 August 2022.

Delene, David J., **Christian Nairy**, Nicholas Camp, Marwa Majdi, Aaron Bansemer, Andrew Detwiler, Andrew Heymsfield, Greg McFarquhar, Joseph Finlon, Robert Rauber, and Emma

Järvinen, *Particle Shattering of Tube-type Cloud Microphysical Probes*, American Geophysical Union Fall Meeting 2022.

Nairy, Christian, Delene, David J., and Andrew Detwiler, *Chain Aggregate Particles in Upper-Tropospheric Clouds*, American Geophysical Union Fall Meeting 2022.

Brechner, Peter A., Greg M. McFarquhar, David J. Delene, **Christian Nairy**, Andrew Heymsfield, Lee Thornhill, Joe Finlon, Darin Toohey, Aaron Bansemer, Bob Rauber, Emma Järvinen, and Martin Schnaiter, *Multimodal Ice Crystal Size Distributions in Atlantic Coast Snowstorms: Results from IMPACTS 2020*, American Geophysical Union Fall Meeting 2022.

Majdi, Marwa, **Christian Nairy**, and David J. Delene, *An Evaluation of a Convolutional Neural Network for Classifying Images from In-situ Cloud Probes*, American Geophysical Union Fall Meeting 2022.

2023

Christian Nairy and Jennifer Moore, *Investigation of Microphysics and Precipitation for Atlantic Coast-Threatening Snowstorms*, Presentation to the Canadian Owners and Pilots Association. March 11th 2023.

Brechner, P., G.M. McFarquhar, J. Schima, D. Delene, **C. Nairy**, K.L. Thornhill, J. Finlon, D. Toohey, A. Heymsfield, A. Bansemer, R. Rauber, E. Järvinen, and M. Schnaiter, 2023: *Multimodal ice crystal size distributions in Atlantic coast snowstorms: Results from IMPACTS 2020*. Amer. Meteor. Soc. Radar Conference, Madison, WI, August 2023.

Nairy, Christian, David J. Delene, Andrew Detwiler, John E. Yorks, & Joseph A. Finlon, *Observations of Chain Aggregates in Upper-tropospheric Clouds During IMPACTS – 15 January 2023 Case Study*, IMPACTS Science Team Meeting. October 25th 2023.

Finlon, Joseph A., John E. Yorks, Patrick Selmer, & **Christian Nairy**, *Relating Lidar Measurements to Cloud Microphysical Properties During IMPACTS*, IMPACTS Science Team Meeting. October 25th 2023.

Brechner, P., G.M. McFarquhar, J. Schima, D.J. Delene, **C. Nairy**, K.L. Thornhill, J. Finlon, D.W. Toohey, A. Heymsfield, A. Bansemer, R. Rauber, E. Järvinen, and M. Schnaiter, 2023: *Multimodal Ice Crystal Size Distributions in Atlantic Coast Snowstorms: Results from IMPACTS 2020*, 32nd Conference on Weather Analysis and Forecasting, 20th Conference on Mesoscale Processes and 28th Conference on Numerical Weather Prediction, Madison, WI

2024

First Symposium on Cloud Physics: Session 15A/15B (Co-Chairs) – Cloud Properties in Winter Storms I/II. **Christian M. Nairy**, John E. Yorks, Lynn McMurdie, Gerald Heymsfield. American Meteorological Society (AMS) Annual Meeting 2024.

Nairy, Christian, David J. Delene, Andrew Detwiler, Joseph Finlon, & John Yorks, *Observations of Chain Aggregates in Mid-to-upper Tropospheric Clouds during IMPACTS – 15*

January 2023 Case Study, Oral presentation, American Meteorological Society (AMS) Annual Meeting, 2024, Baltimore, MD.

Majdi, Marwa, **Christian Nairy**, & David Delene, *An Evaluation of a Convolutional Neural Network for Classifying Images from In-situ, High-resolution Cloud Probes*, Poster presentation, American Meteorological Society (AMS) Annual Meeting, 2024, Baltimore, MD.

Finlon, Joseph A., John E. Yorks, Patrick Selmer, **Christian Nairy**, & Lynn McMurdie, *Disentangling Cloud Microphysical Properties from Lidar Backscatter and Depolarization Measurements in Winter Storms During the IMPACTS Field Campaign*, Oral presentation, American Meteorological Society (AMS) Annual Meeting, 2024, Baltimore, MD.

Greg M. McFarquhar, R. M. Rauber, D. M. Plummer, B. Jewett, A. M. Dzambo, P. A. Brechner, MS, C. Hall, J. Schima, P. Davis, J. Douglas, A. M. Murphy, D. J. Delene, **C. Nairy**, D. W. Toohey, D. Noone, E. Järvinen, M. Schnaiter, J. Finlon, K. L. Thornhill, A. J. Heymsfield, and A. Bansemer, *Use of In-Situ Airborne Measurements of Cloud Microphysical Properties to Quantify Processes Occurring in Wintertime Snow Storms*, Oral presentation, American Meteorological Society (AMS) Annual Meeting, 2024, Baltimore, MD.

Peter Anthony Brechner, MS, Univ. of Oklahoma, Norman, OK; and G. M. McFarquhar, J. C. Schima, D. J. Delene, **C. Nairy**, K. L. Thornhill, J. Finlon, D. W. Toohey, D. Noone, A. J. Heymsfield, A. Bansemer, R. M. Rauber, E. Järvinen, and M. Schnaiter, *Multimodal Ice Crystal Size Distributions in Atlantic Coast Snowstorms: Results from IMPACTS*, Poster presentation, American Meteorological Society (AMS) Annual Meeting, 2024, Baltimore, MD.

Nairy, C. M., D. J. Delene, A. Detwiler, J. E. Yorks, J. A. Finlon, K. L. Thornhill, 2024: Segregating Chain Aggregates Using In-situ Cloud Particle Properties Observed in Winter Storms. Poster presented at the International Conference on Clouds and Precipitation (ICCP), Jeju Island, South Korea, 18 July 2024. Poster #185.

P. Brechner, McFarquhar G., Yeh P., Colle B., Delene D., **Nairy C.**, Thornhill K. L., Finlon J., Toohey D., Noone D., Heymsfield A., Bansemer A., Rauber R. M., Jarvinen E., Schnaiter M., 2024: *On the Stochastic Accuracy of Models in Predicting the Size Distributions of Ice Crystals in Winter Storms: Results from IMPACTS*. Oral presentation at the International Conference on Clouds and Precipitation (ICCP), Jeju Island, South Korea, 18 July 2024.

J. A. Finlon, J. E. Yorks, **C. M. Nairy**, P. Selmer, L. A. McMurdie, 2024: *How do Cloud Microphysical Properties Influence Airborne Lidar Measurements in Winter Storms?: Results from the IMPACTS Field Campaign*. Oral presentation at the International Conference on Clouds and Precipitation (ICCP), Jeju Island, South Korea, 18 July 2024.

M. Majdi, **C. Nairy**, D. Delene, 2024: *An Evaluation of a Convolutional Neural Network for Classifying Images from In-situ, High-resolution Cloud Probes*. Poster presented at the International Conference on Clouds and Precipitation (ICCP), Jeju Island, South Korea, 15 July 2024. Poster #175.

Nairy, C. M., D. J. Delene, A. Detwiler, J. E. Yorks, J. A. Finlon, K. L. Thornhill, 2024: Evaluating Random Forest Classification for Ice Crystal Chain Aggregates. Poster presented at the IMPACTS Science Team Meeting, 31 July 2024.

E. L. Dunnavan, J. A. Finlon, D. J. Delene, **C. M. Nairy**, A. Bansemer, 2024: Improving Understanding of Ice Particle Shapes and Orientations: Reconciling 2D-S Cloud Probe Observations with Theoretical Simulations. Oral Presentation (A44A-06) at the American Geophysical Union Conference, 12 December 2024.

J. E. Finlon, J. E. Yorks, P. A. Selmer, **C. M. Nairy**, A. Heymsfield, E. P. Nowottnick, 2024: Determining Cloud Particle Types During the IMPACTS Field Campaign Using Backscatter Lidar Data and a Clustering Approach. Poster Presentation (A31G-1809) at the American Geophysical Union Conference, 11 December 2024.

J. Gong, J. A. Finlon, R. Kroodsma, **C. M. Nairy**, D. M. Mach, I. S. Adams, D. L. Wu, 2024: What microwave and sub-millimeter polarimetric signal can tell us regarding cloud/precipitation particle microphysics? - A lens through a case study using the IMPACTS campaign multi-instrument observations. Poster Presentation (A31G-1818) at the American Geophysical Union Conference, 11 December 2024.

M. Majdi, **C. M. Nairy**, D. J. Delene, 2024: Classification of Ice crystal Images from In-situ, High-resolution Cloud Probes using a Convolutional Neural Network. iPoster Presentation (A03-36) at the American Geophysical Union Conference, 9-13 December 2024.

P. A. Brechner, G. M. McFarquhar, P. Yeh, Y. Huang, D. J. Delene, **C. M. Nairy**, K. L. Thornhill, J. Finlon, D. W. Toohey, D. Noone, A. J. Heymsfield, B. Colle, A. Bansemer, E. Järvinen, and M. Schnaiter, 2024: On the Stochastic Accuracy of Models in Predicting the Size Distributions of Ice Crystals in Winter Storms: Results from IMPACTS. Oral Presentation (A42A-07) at the American Geophysical Union Conference, 12 December 2024.

2025

Nairy, C. M., D. J. Delene, J. E. Yorks, J. A. Finlon, K. L. Thornhill, 2025: Applying and Evaluating Random Forest Classification to Identify Ice Crystal Chain Aggregates during the IMPACTS Field Campaign. Oral Presentation (9.2) at the American Meteorological Society Conference, 15 January 2025.

Delene, David J, **Christian Nairy**, Marwa Majdi, Andrew Detwiler, Shawn Wagner, and Youngsuk Oh, Chain Aggregates Observations during Recent Field Campaigns, Oral presentation at the Busan IAMAS-IACS-IAPSO Joint Assembly 2025 (BACO-25) in M04 (C101-C102, July 22/23) - Cloud-Precipitation-Aerosol Studies Symposium, at 14:45-15:00 on Tuesday 22 July 2025 in Convention Hall 1F, C101 - 102 in Busan, Republic of Korea.

Nairy C. M., 2025: Quantifying Electrical Influences on Ice Crystal A Fourth Future Aerospace Strategic Thinking (FAST) Research Session. Wednesday 10 September 2025 in Robin Hall 404, University of North Dakota, Grand Forks ND.

Nairy C. M., D. J. Delene, S. W. Wagner, J. A. Finlon, J. E. Yorks, 2025: Identifying Ice Crystal Chain Aggregates in Cold-Season Storms: Leveraging Machine Learning to Map Occurrence and Distribution. Oral Presentation at the 5th International Summrnational Summer Snowfall Workshop - 15 - 17 September 2025, Department of Meteorology, University of Reading, UK.