

## Recent Publications

M. Oue, M.R. Kumjian, Y. Lu, Z. Jiang, E.E. Clothiaux, J. Verlinde, and K. Aydin, "X-Band Polarimetric and Ka-Band Doppler Spectral Radar Observations of a Graupel-Producing Arctic Mixed-Phase Cloud," *J. Appl. Meteor. Climatol.*, 54, 1335-1351, 2015.

<http://dx.doi.org/10.1175/JAMC-D-14-0315.1>

M. Oue, M. R. Kumjian, Y. Lu, J. Verlinde, K. Aydin, and E. E. Clothiaux, "Linear Depolarization Ratios of Columnar Ice Crystals in a Deep Precipitating System Over the Arctic Observed by Zenith-Pointing Ka-Band Doppler Radar," *J. Appl. Meteor. Climatol.*, 54, 1060–1068, May 2015.

<http://dx.doi.org/10.1175/JAMC-D-15-0012.1>

Y. Lu, K. Aydin, E. Clothiaux, and J. Verlinde, "Retrieving Cloud Ice Water Content Using Millimeter- and Centimeter-Wavelength Radar Polarimetric Observables," *J. Appl. Meteor. Climatol.*, 54(3), 596–604, March 2015.

<http://dx.doi.org/10.1175/JAMC-D-14-0169.1>

Y. Lu, E. Clothiaux, K. Aydin and J. Verlinde, "Estimating Ice Particle Scattering Properties Using a Modified Rayleigh-Gans Approximation," *J. Geophys. Res.: Atmos.*, 119, 10,471-10,484, September 2014.

<http://dx.doi.org/10.1002/2014JD021850>

Y. Lu, K. Aydin, E. Clothiaux, and J. Verlinde, "Dielectric Constant Adjustments in Computations of the Scattering Properties of Solid Ice Crystals Using the Generalized Multi-Particle Mie Method," *J. Quant. Spectrosc. Radiat. Transf.*, 135, 1-8, March 2014.

<http://dx.doi.org/10.1016/j.jqsrt.2013.12.005>

G. Botta, K. Aydin, and J. Verlinde, "Variability in Millimeter Wave Scattering Properties Of Dendritic Ice Crystals," *J. Quant. Spectrosc. Radiat. Transf.*, 131, 105-114, December 2013.

<http://dx.doi.org/10.1016/j.jqsrt.2013.05.009> (not NSF)

Y. Lu, E. Clothiaux, K. Aydin, G. Botta, and J. Verlinde, "Modeling Variability in Dendritic Ice Crystal Backscattering Cross Sections at Millimeter Wavelengths Using a Modified Rayleigh-Gans Theory," *J. Quant. Spectrosc. Radiat. Transf.*, 131, 95-104, December 2013.

<http://dx.doi.org/10.1016/j.jqsrt.2013.05.008> (not NSF)

Botta, G., K. Aydin, J. Verlinde, A. E. Avramov, A. S. Ackerman, A. M. Fridlind, G. M. McFarquhar, and M. Wolde, 2011: Millimeter wave scattering from ice crystals and their aggregates: Comparing cloud model simulations with X- and Ka-band radar measurements, *J. Geophys. Res.*, **116**, D00T04, 13 pages, January 2011.

<http://dx.doi.org/10.1029/2011JD015909>

Avramov, A.E., A.S. Ackerman, A.M. Fridlind, B. van Dierenhoven, G. Botta, **K. Aydin**, J. Verlinde, A. Korolev, W. Strapp, G.M. McFarquhar, R. Jackson, S.D. Brooks, A. Glenn, and M. Wolde, 2011: Towards ice formation closure in arctic mixed-phase boundary layer clouds during ISDAC. *J. Geophys. Res.* **116**, D00T08, 25 pages, January 2011.

<http://dx.doi.org/10.1029/2011JD015910>

Botta, G., K. Aydin, and J. Verlinde, "Modeling of Microwave Scattering from Cloud Ice Crystal Aggregates and Melting Aggregates: A New Approach," *IEEE Geosci. Remote Sens. Lett.*, 7(3), 572–576, July 2010.

<http://dx.doi.org/10.1109/LGRS.2010.2041633>