

## CURRICULUM VITAE

**NAME:** Mariko Oue

**CURRENT POSITION:**

Postdoctoral fellow at Stony Boor University (Adviser: Dr. Pavlos Kollias),  
School of Marine and Atmospheric Sciences, Stony Brook University,  
Stony Brook, NY 11794

**LATEST WORK:**

Postdoctoral fellow at Stony Brook University, supported by the U.S. Department of Energy's Atmospheric Science Program Atmospheric System Research.  
Studies of dynamics and microphysics of ice and mixed-phase clouds and shallow cumulus clouds using a forward radar simulator and field observation data including millimeter-wavelength polarimetric radars and lidars. Main objective is to retrieve habits and types of ice crystals in the Arctic precipitation clouds and cloud properties of shallow warm cumulus clouds.  
Strong experiences in analysis using radar Doppler spectra and polarimetric variables for cloud microphysics in conjunction with lidar measurements. Acquired abilities of both observational data analysis and numerical simulation of cloud and precipitation using WRF and forward radar simulator.

**EDUCATION:**

Ph.D. in Science  
Graduate School of Environmental Studies, Nagoya University, Japan, September, 2010  
“Characteristics of Precipitation Particle Distribution in Convective Cells around Okinawa Island during the Baiu Period”  
M.S. in Science  
Graduate School of Environmental Studies, Nagoya University, Japan, March, 2008  
B.S. in Arts and Sciences  
Department of Arts and Sciences, Faculty of Education, Osaka Kyoiku University, Japan, March, 2006

**WORK EXPERIENCE:**

Post-doctoral Fellow since March 2016  
School of Marine and Atmospheric Sciences, Stony Brook University, USA  
  
Post-doctoral Fellow from September 2012 to September 2015  
Department of Meteorology, The Pennsylvania State University, USA  
  
Post-doctoral Research Scientist from October 2010 to August 2012  
Hydrospheric Atmospheric Research Center, Nagoya University, Japan  
  
Research Assistant from June 2008 to September 2010  
Graduate School of Environmental Studies, Nagoya University, Japan

**PUBLISHED PAPERS:**

North, K. W., **M. Oue**, P. Kollias, S. E. Giangrande, S. M. Collis, and C. K. Potvin, 2017: Vertical air motion retrievals in deep convective clouds using the ARM scanning radar network in Oklahoma during MC3E. *Atmospheric Measurement Techniques*, vol. 10, 2785-2806, doi: 10.5194/amt-10-2785-2017.

Jiang, Z., **M. Oue**, J. Verlinde, E. E. Clothiaux, K. Aydin, and G. Botta, 2016: What do we know about aspect ratios of aggregates? *J. Appl. Meteor. Climatol.*, vol. 56, 725-734, doi: 10.1175/JAMC-D-16-0248.1.

**Oue, M.**, P. Kollias, K. W. North, A. Tatarevic, S. Endo, A. M. Vogelmann, and W. I. Gustafson Jr., 2016: Estimation of cloud fraction profile in shallow convection using a scanning cloud radar. *Geophys. Res. Letters*, vol. 43, 10998–11006, doi: 10.1002/2016GL070776.

Kalesse, H., G. de Boer, A. Solomon, **M. Oue**, M. Ahlgrimm, D. Zhang, M. Shupe, E. Luke, and A. Protat, 2016: Understanding rapid changes in phase partitioning between cloud liquid and ice in stratiform mixed-phase clouds: An Arctic Case Study. *Mon. Wea. Rev.*, 144, 4805-4826, doi: 10.1175/MWR-D-16-0155.1.

Wen, G., **M. Oue**, A. Protat, J. Verlinde, and H. Xia, 2016: Ice particle type identification for shallow Arctic mixed-phase clouds using X-band polarimetric radar. *Atmos. Res.*, vol. 182, 114-131, doi: 10.1016/j.atmosres.2016.07.015.

Ohigashi, T, K. Tsuboki, and **M. Oue**, 2016: Cloud-top supercooled liquid droplets in stratiform clouds observed during winter in inland Hokkaido, Japan. *SOLA*, vol. 12, 140–145, doi:10.2151/sola.2016-030.

**Oue, M.**, M. Galletti, J. Verlinde, A. Ryzhkov, and Y. Lu, 2016: Use of X-band differential reflectivity measurements to study shallow Arctic mixed-phase clouds. *J. Appl. Meteor. Climatol.*, vol. 55, 403-424, doi: 10.1175/JAMC-D-15-0168.1.

Kouketsu, T., H. Uyeda, T. Ohigashi, **M. Oue**, H. Takeuchi, T. Shonoda, K. Tsuboki, M. Kubo, and K. Muramoto, 2015: A hydrometeor classification method for X-band polarimetric radar: Construction and validation focusing on solid hydrometeors under moist environment. *J. Atmos. Ocean. Technol.*, vol. 32, 2052-2074, doi: 10.1175/JTECH-D-14-00124.1.

**Oue, M.**, T. Ohigashi, K. Tsuboki, and E. Nakakita, 2015: Vertical distribution of precipitation particles in Baiu frontal stratiform intense rainfall around Okinawa Island, Japan. *J. Geophys. Res.*, vol. 120, 5622–5637, doi: 10.1002/2014JD022712.

**Oue, M.**, M. R. Kumjian, Y. Lu, J. Verlinde, K. Aydin, and E. E. Clothiaux, 2015: 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.*, vol. 54, 1060-1068, doi: 10.1175/JAMC-D-15-0012.1.

**Oue, M.**, M. R. Kumjian, Y. Lu, Z. Jiang, E. E. Clothiaux, J. Verlinde, and K. Aydin, 2015: X-band polarimetric and Ka-band Doppler spectral radar observations of a graupel-producing Arctic mixed-phase cloud. *J. Appl. Meteor. Climatol.*, vol. 54, 1335-1351, doi: 10.1175/JAMC-D-14-0315.1.

**Oue, M.**, K. Inagaki, T. Shinoda, T. Ohigashi, T. Kouketsu, M. Kato, K. Tsuboki, and H. Uyeda, 2014: Polarimetric Doppler radar analysis of orientation of a stationary rainband with changing orientations in July 2010. *J. Meteor. Soc. Japan*, vol. 92, 457–481, doi: 10.2151/jmsj.2014-503.

**Oue, M.**, H. Uyeda and D.-I. Lee, 2011: Raindrop size distribution parameters estimated from polarimetric radar variables in convective cells around Okinawa Island during the Baiu period. *Asia-Pacific J. of Atmos. Sci.*, vol. 47(1), 33–44, doi:10.1007/s13143-011-1003-x.

**Oue, M.**, H. Uyeda and Y. Shusse, 2010: Two types of precipitation particle distribution in convective cells accompanying a Baiu frontal rainband around Okinawa Island, Japan. *J. Geophys. Res.*, vol. 115, D02201, doi: 10.1029/2009JD011957.