**Ju-Mee Ryoo, Ph.D**
NASA Ames Research Center, Science and Technology Corporation
Email: ju-mee.ryoo@nasa.gov

**Education**

| | |
|---|---|
| Ph.D. in Earth and Planetary Sciences | **Johns Hopkins University, USA** |
| M.A. in Earth and Planetary Sciences | **Johns Hopkins University, USA** |
| M.S. in Atmospheric Sciences | **Yonsei University** |
| B.S. in Mathematics, Atmospheric Sciences (double major) | **Yonsei University** |

**Work experience**
NASA Ames Research Center (2014-present)
University of California, Berkeley (2012- 2014)
Jet Propulsion Laboratory, California Institute of Technology (2009 -2011)

**Research Interest**
• Expertise in atmospheric dynamics in various temporal and spatial scales, particularly understanding of the extreme weather (e.g. Atmospheric Rivers) events using models and data analysis in various scale (from synoptic- to local, ENSO).
• The role of meteorology on pollution, GHG estimation, long-range transported dust, O3 and aerosols

**Awards & Honors**
***NASA Ames Contractor Council, Certificate of Excellence award as an ObseRvation of Aerosols above CLouds and their intEractionS (ORACLES) participant*** (2017)
***Best poster award*** at the Chapman conference (titled as 'Atmospheric water vapor and its role on the climate') in convection session (2008)
***NASA-NSF Research Project*** (2005-2009)
***Johns Hopkins University, Gillman Fellowship*** (2004-2005)
***BK 21(Brain Korea 21 Century) Scholarship*** (2002)
***Honor student Scholarship*** provided by the Astronomy and Atmospheric Sciences Alumni Association (1999-2000)

**Selected Published & on-going Journal Publications**

**Ryoo, J.-M.,** S. Chiao, J. R. Spackman, L. T. Iraci, R. B. Pierce, F. M. Ralph, J. E. Marrero, E. L. Yates, W. Gore, A. Martin, R. M. Dole, **2020**: Terrain Trapped Airflows and Precipitation Variability during an Atmospheric River, *accepted at J. Hydrometeorology*.

**Ryoo, J.-M.**, L. T. Iraci, T. Tanaka, J. E. Marrero, E. L. Yates, I. Fung, Anna M. Michalak, Jovan Tadić, and W. Gore, T. Paul Bui, J. M. Dean-Day, C. S. Chang **2019**: Quantification of CO2 and CH4 emissions over Sacramento, California based on divergence theorem using aircraft measurement, *Atmos. Meas. Tech.,* 12, 2949–2966, *https://doi.org/10.5194/amt-12-2949-2019.*

Langford, A.O., R. J. Alvarez II. G/ Kirgis, C.J. Senff, D. Caputi, S.A. Conley, I. C. Faloona, L. T. Iraci, J.E. Marrero, M. E. McNamara, **J.-M. Ryoo**, and E.L. Yates, **2019**: Lidar and aircraft profiling of ozone above

the central San Joaquin Valley during the California Baseline Ozone Transport Study (CABOTS), *Atmos. Meas. Tech., 12, 1889–1904, 2019, https://doi.org/10.5194/amt-12-1889-2019*

Faloona, I. C., S. Chiao, A. Eiserloh, R. J. Alvarez II, G. Kirgis, A. Langford, C. Senff, D. Caputi, A. Hu, L. T. Iraci, E. L. Yates, J. E. Marrero**, J.-M. Ryoo,** S. Conley, S. Tanrikulu, J. Xu, and T. Kuwayama, **2019**: The California Baseline Ozone Transport Study (CABOTS), *BAMS*, *https://doi.org/10.1175/BAMS-D-18-0302.1*

Ira Leifer, C. Melton, M. L. Fischer, M. Fladeland, J. Frash, W. Gore, L. T. Iraci, J. E. Marrero, **J.-M. Ryoo**, T. Tanaka, and E. L. Yates, **2018**: Atmosperic characterization through fused mobile airborne and surface in situ surveys: methane emissions quantification from a producing oil field. Atmos. Meas. Tech., 11, 1-17, **2018**, https:doi.org/10.5194/amt-11-1-2018.

Yates, E. L., M. S. Johnson, L. T. Iraci, **J.-M. Ryoo**, B. J. Johnson, M. A. Ives, T. LeBlanc, M. S. Gustin, T. Tanaka, W. Gore, **2017**: Western US tropospheric ozone: An assessment of vertical, seasonal and spatial variations over California and Nevada, J. of Geophys. Res.: Atmos., 122. https://doi.org/10.1002/2016JD026266.

**Ryoo, J.-M.,** M. S. Johnson, E. L. Yates, L. T. Iraci, R. B. Pierce, T. Tanaka, W. Gore, **2017**: Investigating sources of ozone over California using AJAX airborne measurements and models: assessing the long-range transport, Atmos. Environ, **155**, 53-67, http://dx.doi.org/10.1016/j.atmosenv.2017.02.008

Tadić, J., A. Michalak, L. Iraci, V. Ilić, S., Biraud, D. Feldman, B. Thaopaul, M. S. Johnson, M. Loewensterin, S. Jeong, M. Fischer, E. Yates, **J.-M. Ryoo**, **2017**: Elliptic cylinder airborne sampling and geostatistical mass balance approach for quantifying local greenhouse gas emissions, Environ. Sci. Tech., 51 (17), 10012-10021, DOI: 10.1021/acs.est.7b03100

**Ryoo, J.-M.**, D. E. Waliser, D. W. Waugh, S. Wong, E. J. Fetzer, I. Fung, **2015**: Classification of atmospheric river events on the U.S. west coast using a trajectory model., *J. Geophys. Res. Atmos.*, **120**, doi:10.1002/2014JD022023.

**Ryoo, J.-M.,** Y. Kaspi, D. W. Waugh, G. N. Kiladis, D. E. Waliser, E. J. Fetzer, J. Kim, **2013**: Impact of Rossby Wave Breaking on U.S. West Coast Winter Precipitation during ENSO Events. *J. Climate*, **26**, 6360–6382, doi: http://dx.doi.org/10.1175/JCLI-D-12-00297.1

Kim, J., D. E. Waliser, P. J. Neiman, B. Guan, **J.-M. Ryoo**, and G. A. Wick, **2013**: Effects of atmospheric river landfalls on the cold season precipitation in California. *Clim. Dyn.*, **40**, 465–474, doi:10.1007/s00382-012-1322-3.

**Ryoo, J.-M.**, T. Igusa, and D. W. Waugh, **2009**: PDFs of Tropical Tropospheric Humidity: Measurements and Theory, *J. Climate*, 22, 3357-3373.

**Ryoo, J.-M.**, D. W. Waugh, and A. Gettelman, **2008**: Variability of subtropical upper tropospheric humidity, *Atmos. Chem. Phys.*, 8, 1041-1067.