QING YUE

Ph.D., Research Scientist
Jet Propulsion Laboratory, California Institute of Technology
MS 233-302C
4800 Oak Grove Dr, Pasadena, CA 91109
Work Phone: (818) 354-1884, Cell Phone: (310)666-8490
E-mail:Qing.Yue@jpl.nasa.gov; airyue@yahoo.com

EDUCATION

Ph.D. Atmospheric and Oceanic Sciences in 2009
Department of Atmospheric & Oceanic Sciences, University of California, Los Angeles
Dissertation: Investigation of the Radiative Forcings of Thin Cirrus in the Tropical Atmosphere Using Remote Sensing Data (with Jacob A. Bjerknes Memorial Award)
Advisor: Dr. Kuo-Nan Liou

Bachelor of Science Atmospheric Sciences in 2003
Department of Atmospheric Sciences, School of Physics, Beijing University, Beijing, China

POSITION

- Jet Propulsion Laboratory, California Institute of Technology
  Research Scientist, 2014-present
- Joint Institute for Regional Earth System Science & Engineering, University of California, Los Angeles / Jet Propulsion Laboratory, California Institute of Technology
  Assistant Researcher, 2012-2014
- Jet Propulsion Laboratory, California Institute of Technology
  Postdoctoral Researcher, 2009-2012

RESEARCH INTEREST

- Spectral and broadband radiative transfer of cloud and aerosols, and its applications in regional and climate models.
- Remote sensing of clouds and atmosphere: retrieval and validation, multi-sensor satellite data fusion, in-situ and field campaign observations and analysis.
- Cloud-climate feedback from observations and climate models.
- Climate data record from multi-sensor satellite observations, reanalysis and model analysis data.
- Cloud-topped maritime boundary layer from multi-sensor satellite observations and numerical model studies.

PUBLICATIONS

1. Su, H., J. H. zhang, J.D. Neelin, T. J. Shen, C. Zhai, **Q. Yue**, Z. Wang, L. Huang, Y. Choi, G. L. Stephens, Y. L. Yung (2017)., Tightening of Hadley ascent and tropical high cloud region key to precipitation change in a warmer climate, Nature Communications, Accepted.
2. Kahn, B. H., Matheou, G., **Yue, Q.,** Fauchez, T., Fetzer, E. J., Lebsock, M., Martins, J., Schreier, M. M., Suzuki, K., and Teixeira, J.(2017): A satellite and reanalysis view of cloud organization, thermodynamic, and dynamic variability within the subtropical marine boundary layer, Atmos. Chem. Phys. Discuss., doi:10.5194/acp-2017-59, in review, 2017.
3. **Yue, Q.**, B. H. Kahn, E. J. Fetzer, S. Wong, R. Frey, and K. G. Meyer (2016), On the response of MODIS cloud coverage to global mean surface air temperature, J. Geophys. Res. Atmos., 121, doi:10.1002/2016JD025174.
4. **Yue, Q**., E. J. Fetzer, B. H. Kahn, M. Schreier, S. Wong, X. Huang, X. Chen, 2016, Observation-based Longwave Cloud Radiative Kernels Derived from the A-Train, *J. Climate, 10.1175/JCLI-D-15-0257.1*
5. Li, J.-L. F., W.-L. Lee, Y.-H. Wang, M. Richardson, J.-Y. Yu, E. Suhas, E. Fetzer, M.-H. Lo, and **Q. Yue** (2016), Assessing the radiative impacts of precipitating clouds on winter surface air temperatures and land surface properties in general circulation models using observations, J. Geophys. Res. Atmos., 121, 11,536–11,555, doi:10.1002/2016JD025175.
6. Kahn, B. H., X. Huang, G. L. Stephens, W. D. Collins, D. R. Feldman, H. Su, S. Wong, and **Q. Yue** (2016), ENSO regulation of far- and mid-infrared contributions to clear-sky OLR, Geophys. Res. Lett., 43, 8751–8759, doi:10.1002/2016GL070263.
7. Wang, T., E. J. Fetzer, S. Wong, B. H. Kahn, and **Q. Yue** (2016), Validation of MODIS cloud mask and multilayer flag using CloudSat-CALIPSO cloud profiles and a cross-reference of their cloud classifications, J. Geophys. Res. Atmos., 121, 11,620–11,635, doi:10.1002/2016JD025239.
8. Lee, WL., Liou, K.N., He, C., **Q. Yue** (2016), Impact of absorbing aerosol deposition on snow albedo reduction over the southern Tibetan plateau based on satellite observations. Theor Appl Climatol doi:10.1007/s00704-016-1860-4.
9. Wong, S., Fetzer, E. J., Schreier, M., Manipon, G., Fishbein, E. F., Kahn, B. H., **Yue, Q.** and Irion, F. W. (2015), Cloud-induced uncertainties in AIRS and ECMWF temperature and specific humidity. J. Geophys. Res. Atmos., 120: 1880–1901. doi: 10.1002/2014JD022440.
10. Kahn, B. H., M. M. Schreier, **Q. Yue,** E. J. Fetzer, F. W. Irion, S. Platnick, C. Wang, S. L. Nasiri, and T. S. L'Ecuyer (2015), Pixel-scale assessment and uncertainty analysis of AIRS and MODIS ice cloud optical thickness and effective radius, J. Geophys. Res. Atmos., 120, 11,669–11,689, doi:10.1002/2015JD023950.
11. Schreier, M. M., Kahn, B. H., Sušelj, K., Karlsson, J., Ou, S. C., **Yue, Q**., and Nasiri, S. L.: Atmospheric parameters in a subtropical cloud regime transition derived by AIRS and MODIS: observed statistical variability compared to ERA-Interim, Atmos. Chem. Phys., 14, 3573-3587, doi:10.5194/acp-14-3573-2014, 2014.

12. Li, J.-L. F., W.-L. Lee, D. E. Waliser, J. P. Stachnik, E. Fetzer, S. Wong, and **Q. Yue** (2014), Characterizing tropical Pacific water vapor and radiative biases in CMIP5 GCMs: Observation-based analyses and a snow and radiation interaction sensitivity experiment, J. Geophys. Res. Atmos., 119, 10,981–10,995, doi:10.1002/2014JD021924.
13. **Yue, Q**., B. H. Kahn, M. Schieier, H. Xiao, E. J. Fetzer, J. Teixeira, and K. Suselj, 2013: Transitions of cloud-topped marine boundary layers characterized by AIRS and MODIS observations, and large eddy simulations, *J. Geophys. Res.*, 118, *8598–8611* DOI: 10.1002/jgrd.50676.
14. **Yue, Q.**, E. J. Fetzer, B. H. Kahn, S. Wong, G. Manipon, A. Guilaume, and B. Wilson, 2013: Cloud-state-dependent sampling in AIRS observations based on CloudSat cloud classification, *J. of Climate*, **26**, 8357–8377, doi: http://dx.doi.org/10.1175/JCLI-D-13-00065.1.
15. Kahn, B. H., Irion, F. W., Dang, V. T., Manning, E. M., Nasiri, S. L., Naud, C. M., Blaisdell, J. M., Schreier, M. M., **Yue, Q**., Bowman, K. W., Fetzer, E. J., Hulley, G. C., Liou, K. N., Lubin, D., Ou, S. C., Susskind, J., Takano, Y., Tian, B., and Worden, J. R., 2014: The Atmospheric Infrared Sounder Version 6 cloud products, *Atmos. Chem. Phys. Discuss.*, 13, 14477-14543, doi:10.5194/acpd-13-14477-2013.
16. Liou, K. N., Y. Takano, **Q. Yue** and P. Yang, 2013: On the Radiative Forcing of Contrail Cirrus Contaminated by Black Carbon, *Geophys. Res. Lett.*, **40**, 778–784, *doi:*10.1002/grl.50110.
17. Steve S. C. Ou, B. H. Kahn, K. N. Liou, Y. Takano, M. M. Schreier, and **Q. Yue,** 2011**:** Retrieval of Cirrus Cloud Properties from the Atmospheric Infrared Sounder: The *k*-Coefficient Approach Combined with SARTA plus Delta-Four Stream Approximation, *IEEE Trans. Geosci. Rem. Sens*., 99, 1−15.
18. **Yue, Q.**, Brian H. Kahn, Eric J. Fetzer, and João Teixeira, 2011: Relationship between oceanic boundary layer clouds and lower tropospheric stability observed by AIRS, CloudSat and CALIOP, J. Geophys. Res., 116, D18212, doi:10.1029/2011JD016136.
19. **Yue, Q.**, and K. N. Liou, 2009: Cirrus Cloud Optical and Microphysical Properties Determined from AIRS Infrared Spectra, *Geophys. Res. Lett.*, 36, L05810, doi:10.1029/2008GL036502.
20. Liou, K. N., Y.Gu, **Q. Yue**, G. McFarquhar, 2008: On the correlation between ice water content and ice crystal size and its application to radiative transfer and general circulation models, *Geophys. Res. Lett.*, 35, L13805, doi:10.1029/2008GL033918.
21. **Yue, Q.**, K. N. Liou, S. C. Ou, B. H. Kahn, P. Yang, and G. G. Mace, **2007**: Interpretation of AIRS data in thin cirrus atmospheres based on a fast radiative transfer model. *J. Atmos. Sci.*, 64, 3827–3842.
22. Kahn, B.H., C. Liang, A. Eldering, A. Gettelman, **Q. Yue**, and K. N. Liou, **2007**: Tropical thin cirrus and relative humidity observed by the Atmospheric Infrared Sounder, *Atmos. Chem. Phys.*, 8, 1501–1518.

HONORS AND AWARDS

- 2017 JPL team award for assessing the consequences of the loss of AMSU-A2 on the AIRS mission
- 2008 Jacob A. Bjerknes Memorial Award, UCLA
- 2008~2009 Dissertation Year Fellowship, UCLA
- 2008~2009 NASA the Earth System Science (ESS) Fellowship
- 2007~2008 NASA the Earth System Science (ESS) Fellowship
- 2006~2007 Pauley Fellowship, UCLA
- 2003~2004 Pauley Fellowship, UCLA
- 2002 Award of Excellent Performance, Peking University
- 2000 Xiyue Fellowship, Peking University, China

SELECTED ORAL PRESENTATIONS

1. **Yue, Q**., E. J. Fetzer, B. H. Kahn, S. Wong, G. Manipon, A. Guillaume, and B. Wilson, **2014**, Cloud-State-dependent sampling in AIRS Observations based on CloudSat cloud classification, presented at Jet Propulsion Laboratory, California Institute of Technology.
2. **Yue, Q.,** B. H. Kahn, H. Xiao, M. M. Schreier, K. Suselj, E. J. Fetzer, and J. Teixeira, **2013**, Transition of cloud-topped marine boundary layer characterized by AIRS, MODIS, and a large eddy simulation (LES) model, presented at Jet Propulsion Laboratory, California Institute of Technology, November 2013.
3. **Yue, Q.,** B. H. Kahn, M. M. Schreier, K. Suselj, H. Xiao, E. J. Fetzer, and J. Teixeira, 2011, Cloud-topped marine boundary layer transition and cloud top entrainment instability (CTEI) observed by A-Train satellites and comparison with numerical model studies, presented in 2011 AGU Fall meeting, San Francisco, American Geophysical Union.
4. **Yue, Q.,** 2011**,** A-train observations of clouds and thermodynamic profiles: An emphasis on cloud state-dependent sampling, tropical cirrus, and marine boundary layer clouds**.** Jet Propulsion Laboratory, Feb. 18, 2011.
5. **Yue, Q.,** E. J. Fetzer, B. H. Kahn, and J. Teixeira, **2010**, On the boundary layer low stratiform clouds from the collocated AIRS and CloudSat data, California Institute of Technology, May 18, 2010, invited.
6. **Yue, Q.,** B. H. Kahn, E. J. Fetzer, and J. Teixeira, **2010**, Relationship between oceanic boundary layer clouds and lower tropospheric stability observed by AIRS, CloudSat, and CALIOP, Aerosol and Cloud Seminar, Jet Propulsion Laboratory, California Institute of Technology, October 11, 2010.
7. **Yue, Q.**, and K. N. Liou, **2008**: Radiative Properties of Tropical Thin Cirrus Based on Remote Sensing Data: Retrieval and Radiative Forcing, 18 July 2008, seminar at NASA Jet Propulsion Laboratory, Pasadena, California.
8. **Yue, Q.**, K. N. Liou, S. C. Ou, B. H. Kahn, P. Yang, G. J. Mace, and J. M. Comstock, **2006**: Interpretation of AIRS thin cirrus spectra using a fast radiative transfer model and ARM measurements, the 12th Conference on Cloud Physics and 12th Conference on Atmospheric Radiation of AMS, 10 –14 July 2006, Madison, Wisconsin, selected oral presentation.
9. **Yue, Q.**, K. N. Liou, S. C. Ou, B. H. Kahn, P. Yang, and G. J. Mace, **2005**: Interpretation of Atmospheric Infrared Sounder (AIRS) measurements in clear and

cirrus cloudy atmosphere based on a fast radiative transfer model, IAMAS 2005 Meeting, 2–11 August 2005, Beijing, China, The International Association of Meteorology and Atmospheric Sciences (IAMAS) / International Union of Geodesy and Geophysics (IUGG).

TEACHING AND OUTREACH ACTIVITY

- 2014 Review panelist for the NASA New Investigator Program
- 2014 ~ pres. Executive Board member in the Southern California Chapter of Chinese-American Oceanic and Atmospheric Association (COAA), Los Angeles, California.
- 2013 Reviewer for the NASA Earth and Space Science Fellowship (NESSF).
- 2008 ~ 2009 Executive Board member in the Southern California Chapter of COAA, Los Angeles, California.
- 2007~2009 Reader and assistant for "Atmospheric Radiation" and "Remote Sensing"
  Department of Atmospheric & Oceanic Sciences, University of California, Los Angeles.
- 2004 Teaching Assistant for "Introduction to Atmospheric Environment",
  Department of Atmospheric & Oceanic Sciences, University of California, Los Angeles.
- July 2002 Internship at Yunnan Environmental Protection Bur