

# Jonathan H. Jiang

**Email:** [Jonathan.H.Jiang@jpl.nasa.gov](mailto:Jonathan.H.Jiang@jpl.nasa.gov); **Tel:** 1-818-207-8734; **Address:** 4800 Oak Grove Drive, Pasadena, CA 91109, USA.

**Research Areas:** My research centers on developing novel methodologies for retrieving microphysical properties of aerosols and clouds from space, and the applications to the studies of atmospheric chemistry, long-range transport, cloud forcing and feedbacks, aerosol-cloud interaction, air quality, and climate model simulations. I'm also actively working on astrophysics projects especially exoplanets and life in the universe. As a Group Supervisor for 329J, I'm leading a team of scientists and engineers to help manage current Earth science missions (MISR and CloudSat) and to prepare future missions (MAIA and ENTICE). I have published more than 200 peer-reviewed journal articles, including *Nature Climate Change* (2), *Nature Climate & Atmospheric Science* (2), *Nature Geoscience* (2), *Nature Communications* (3), *Nature Astronomy* (2), *PNAS* (4), *Science Advances* (2), *Scientific Reports* (2), and *Physics Today* (1), etc. Total over 10,000 citations, with *h-index* of 49, and 20 papers have been cited over 100 times, according to the ISI Web of Science. Many of these publications were widely covered by the media/news outlets.

## Education

1997: **Postdoctoral Research Fellow** in Atmospheric Science, McGill University, Montreal, Canada  
1996: **Ph.D.** in Atmospheric Science, York University, Toronto, Canada  
1991: **M.Sc.** in Astrophysics, York University, Toronto, Canada  
1985: **B.Sc.** in Astrophysics, Beijing Normal University, China

## Employment

- **Group Supervisor** (2015-present), Aerosol and Cloud Research Group, Jet Propulsion Laboratory (JPL), California Institute of Technology (Caltech), Pasadena, California, USA.
- **Principal Scientist** (2014-present), JPL Engineering and Science Directorate, Caltech
- **Research Scientist V** (2013-2014), JPL, Caltech
- **Research Scientist IV** (2004-2012), JPL, Caltech
- **Scientist III** (2002-2003), JPL, Caltech
- **Caltech Postdoctoral Scholar** (1999-2001), Caltech
- **Research Associate** (1998-1999), Université du Québec à Montréal, Quebec, Canada
- **Physics Lecturer** (1997-1998), Trent University, Peterborough, Ontario, Canada
- **Postdoctoral Research Fellow** (1996-97), McGill University, Montreal, Quebec, Canada
- **Physics Lecturer** (1996, 1999), University of Waterloo, Waterloo, Ontario, Canada
- **Research Assistant** (1991-1995), Centre for Research in Earth and Space Science, Toronto, Canada
- **Teaching Assistant** (1991-1995), Physics Department, York University, Toronto, Canada
- **Assistant Researcher** (1989-1990), Space Astrophysics Laboratory, Ontario, Canada
- **Physics Lecturer** (1985-1989), Nanking Institute of Technology, Nanjing, China

## Awards

2020: **The Reuters List of Word's Top Climate Scientists:** <https://www.reuters.com/investigates/special-report/climate-change-scientists-list/>

2019: **Exceptional Scientific Achievement Medal** for exceptional scientific achievement by significantly enhancing understanding of impacts of aerosol pollution on convection, clouds, and climate.

2019: **Edward Stone Award** for outstanding scientific research publications.

2016: **JPL GS Award** for outstanding leadership & effective management of combining sections 324 & 328.

2013: **NASA Exceptional Achievement Medal** for outstanding leadership and achievements in using NASA satellite observations for climate studies and model evaluations, contributing to the IPCC AR5.

2012: **JPL Publication Award** for outstanding CMIP5 climate model evaluation publications using NASA data

2010: **NASA Exceptional Achievement Medal** for pioneering a new approach to quantifying the impact of air pollution on clouds and climate, through combining observations from multiple NASA satellites.

2008: **NASA Team Achievement Award** for outstanding contribution to NASA TC4 field experiment.

2007: **JPL Team Award** for scientific application of Aura Microwave Limb Sounder (MLS) Cloud Ice product.

2006: **NASA Group Achievement Award** for Aura Microwave Limb Sounder Science Team.

2006: **Edward Stone Award** for outstanding scientific research paper, co-author.  
 2005: **NASA Group Achievement Award** for outstanding contribution to the Aura MLS Project.  
 2005: **GSFC Group Achievement Award** for outstanding contribution to the Aura Science Team.  
 2005: **NASA Space Act Award** for Significant Contribution to National Space Program.  
 2004: **NASA Group Achievement Award** for contribution to Aura Ground Data System Development.  
 2002: **JPL SPOT Award** for successfully development of microwave cloud forward model and retrieval system.  
 1999: **Canadian NSERC Research Scholarship Award** for outstanding early career scientists.  
 1996: **AMS Global Change Travel Award** for outstanding student presentation.  
 1989-1995: **Ontario Scholarship Award** for outstanding graduate students.

### **Other leadership positions, notable committees and professional activities**

- **American Meteorological Society (AMS)** (1995-present);
  - **Chair**, AMS Atmospheric Chemistry Committee (2020-present)
  - **Vice-Chair**, AMS Atmospheric Chemistry Committee (2017-2019)
  - **Member**, AMS Atmospheric Chemistry Committee (2014-2016)
  - **Program Chair**, AMS 22<sup>nd</sup> Conference on Atmospheric Chemistry (2019-2020)
  - **Program Chair**, AMS 21<sup>th</sup> Conference on Atmospheric Chemistry (2018-2019)
  - **Program Chair**, AMS 20<sup>th</sup> Conference on Atmospheric Chemistry (2017-2018)
  - **Program Chair**, AMS 19<sup>th</sup> Conference on Atmospheric Chemistry (2016-2017)
  - **Program Co-Chair**, AMS 18<sup>th</sup> Conference on Atmospheric Chemistry (2015-2016)
- **American Geophysical Union (AGU)** (1993-present)
  - **Editor in Chief**, Earth and Space Science Open Archive (2021-present)
  - **Editor**, Earth and Space Science (2014-present)
  - **Associate Editor**, Journal of Geophysical Research – Atmosphere (2012-present)
  - **Chair**, AGU Atmospheric Science Program Committee (2017)
  - **Member**, AGU Atmospheric Science Program Committee (2016)
  - **Coordinator**, Outstanding Student Paper Awards (OSPA), AGU Fall Meeting (2014-2016)
  - **Session Chair**, AGU Fall Meetings (2009-2020)
  - **AGU Editorial Tour Organizer**, organized AGU workshops for over 30 universities and institute in China and in U.S. to promote AGU journals (2015-2019)
- **International Commission on Atmospheric Chemistry and Global Pollution (iCACGP)**
  - Member, Scientific Steering Committee (2019-present)
- **Asia Oceania Geosciences Society (AOGS1)**
  - Session Chair, AOGS Annual Meetings (2011-2020)
- **American Association for the Advancement of Science (AAAS)**
  - Member (2003-present)
- **Canadian Meteorological and Oceanographic Society (CMOS)**
  - Member (1009-2000)
- **Committee on Space Research (COSPAR)**
  - Member and Session Chair, Scientific Assembly (2002-2004)
- **European Geosciences Union**
  - Member (2007-present)
- **Review Panels**: Served on NASA, NSF, DOE, ESA, and CSA panels multiple times (2002-present)
- **Active Reviewers** for more than 20 journals, include Nature, PNAS, AGU, AMS, EGU, IUGG and COSPAR journals (1996-present)
- **President and Board Member**, The Chinese-American Oceanic and Atmospheric Association, Southern California Chapter (2013-2015)
- **Science-Technology-Engineering-Mathematics (STEM) Program Chair**, The Chinese-American Engineers and Scientists Association of Southern California (2018-2020).

# Selected Refereed Publications

(Over 200 peer-reviewed papers, H-Index 49)

1. **Jiang, J.H.**, R. Burn, K. Fahy, X. Ji, P. Eggenberger, Angular momentum distributions for observed and modeled exoplanetary systems, arXiv:2108.02890, in press, *The Astrophysics Journal*, 2021.
2. Kong, Z., **J.H. Jiang**, R. Burn, K. Fahy, Z. Zhu, Analyzing the Stability of Non-coplanar Circumbinary Planets using Machine Learning, in review, *Astrophysical Journal*, arXiv:2109.08735, 2021.
3. Li, J., K. Xu, M. Richardson, **J.H. Jiang**, G. Stephens, W. Lee, E. Fetzer, J. Yu, Y. Wang, F. Wang, Improved ice content, radiation, precipitation and low-level circulation over the tropical pacific from ECMWF ERA-interim to ERA5, *Environmental Research Communications*, Vol. 3, No. 8, 2021.
4. Chakraborty, S., **J.H. Jiang**, H. Su, R. Fu, On the Role of Aerosol Radiative Effect in the Wet Season Onset Timing over the Congo Rainforest during Boreal Autumn, *Atmospheric Physics and Chemistry*, doi:10.5194/acp-2020-1138,2021.
5. **Jiang, J.H.**, P. Rosen, K. Fahy, Avoiding the “Great Filter”: A Projected Timeframe for Human Expansion Off-World, *Galaxies*, 9(3), 53; <https://doi.org/10.3390/galaxies9030053>, 2021.
6. Lee, M., J. Worden, R. Bucholz, H. Worden, M. Park, Y. Wang, J. Yang, M. Witek, H. Su, B. Byrne, K. Miyazaki, **J.H. Jiang**, 21<sup>st</sup> Century change in global small-size aerosols from combustion emissions, *JGR-Atmosphere*, in press, 2021.
7. Li, J.Z., **J.H. Jiang**, H. Yang, D.S. Abbot, R. Hu, T. Komacek, S. Bartlett, Y. Yung, Rotation Period Detection for Earth-like Exoplanets, *Astronomical Journal*, in press, 2021.
8. Basha, G., M. Ratnam, **J.H. Jiang**, P. Kishore, S. Babu, Influence of Indian Summer Monsoon on Tropopause, Trace gases and Aerosols in Asian Summer Monsoon Anticyclone observed by COSMIC, MLS and CALIPSO, *Remote Sensing*, in Press, 2021.
9. Yang, J., Y. Wen, Y. Wang, S. Zhang, J. Pinto, E. Pennington, Z. Wang, Y. Wu, S. Sander, **J.H. Jiang**, J. Hao, J. Seinfeld, Y. Yung, From COVID-19 to Future Electrification: Assessing Traffic Impacts on Air Quality in a Megacity, *P.N.A.S.*, 118 (26) e2102705118, 2021.
10. Li, J., K. Xu, W. Lee, **J.H. Jiang**, E. Fetzer, J. Yu, Y. Wang, G. Stephens, L. Wang, Linking global land surface temperature projections to radiative effects of hydrometeors under a global warming scenario, *Environ. Res. Lett.*, <https://doi.org/10.1088/1748-9326/ac153c>, 2021.
11. Patel., P., **J.H. Jiang**, Cloud condensation nuclei characteristics at the Southern great Plains site: role of particle size distribution and aerosol hygroscopicity, *Environ. Res. Commun.* 3, No. 7, 2021.
12. Kong, Z., **J.H. Jiang**, Z. Zhu, K. Fahy, R. Burn, Analyzing the Stability of Non-coplanar Circumbinary Planets using Machine Learning, *Astrophysical Journal*, arXiv:2101.02316, 2021.
13. Sanghavi, S., R. West, **J. Jiang**, Cloudy Atmospheres on Directly Imaged Exoplanets: The Need for Accurate Particulate Representation in Photopolarimetric Simulations, *Cloudy Atmospheres on Directly Imaged Exoplanets: The Need for Accurate Particulate Representation in Photopolarimetric Simulations*, *The Astrophysical Journal*, 907:30 (15pp), 2021.
14. **Jiang, J.H.**, H. Su, L. Wu, C. Zhai, K. Schiro, Improvements in cloud and water vapor simulations over the tropical oceans in CMIP6 compared to CMIP5, *Earth and Space Science*, doi:10.1002/2021EA001520, 2021.
15. **Jiang, J.H.**, D. Zhao, X. Ji, B. Hu, Revisiting the Planet Mass and Stellar Metallicity Relation for Low-Mass Exoplanets Orbiting GKM Class Stars, *Universe*, 7, 88. <https://doi.org/10.3390/universe7040088>, 2021.
16. Cai, X., **J.H. Jiang**, K. Fahy, Y. Yung, A Statistical Estimation of the Occurrence of Extraterrestrial Intelligence in the Milky Way Galaxy, *Galaxies*, Vol 9, 1, doi:10.3390/galaxies9010005 2021.
17. Gu, L., S. Fan, J. Li, S. Bartlett, V. Natraj, **J.H. Jiang**, D. Crisp, Y. Hu, G. Tinetti, Y. Yung, Earth as a Proxy Exoplanet: Deconstructing and Reconstructing Spectrophotometric Light Curves, *The Astronomical Journal*, 161:122(13pp), 2021.
18. **Jiang, J.H.**, Polar Vortex Linked to Atmospheric Circulation at Daily Scale, *AGU Eos*, October 13, 2021, <https://eos.org/editor-highlights/polar-vortex-linked-to-atmospheric-circulation-at-daily-scale>.

19. Choi, M., S. Sander, R. Spurr, T. Pongetti, G. van-Harten, B. Drouin, D. Diner, D. Crisp, A. Eldering, O. Kalashnikova, **J.H. Jiang**, J. Hyon, D. Fu, Aerosol profiling using radiometric and polarimetric spectral measurements in the O<sub>2</sub> near infrared bands: Estimation of information content and measurement uncertainties, *Remote Sensing of Environ.*, Vol. 253, 2021.
20. **Jiang, J.H.**, Temperature Extremes: Exploring the Global Outbreak, AGU Eos, September 27, 2021, <https://eos.org/editor-highlights/temperature-extremes-exploring-the-global-outbreak>.
21. **Jiang, J.H.**, Satellite Estimates for Hydroclimatic Extremes, AGU Eos, September 20, 2021, <https://eos.org/editor-highlights/satellite-estimates-for-hydroclimatic-extremes>.
22. Li, J. W. Lee, K. Xu, **J.H. Jiang**, E. Fetzer, C. Chen, P. Hsu, H. Hsu, J. Yu, Y. Wang, Impacts of Falling Ice Radiative Effects on Projections of Southern Ocean Sea Ice Change under Global Warming, *TAO*, DOI: 10.3319/TAO.2020.10.15.01., 2020
23. Hwang, J, Y. Choi, H. Su, **J.H. Jiang**, Invariability of Arctic Top of Atmosphere Radiative Response to Surface Temperature Changes, *Earth and Space Science*, Vol. 7, 11, 2020.
24. Chakraborty, S., **J.H. Jiang**, H. Su, R. Fu., Deep convective evolution from shallow clouds over the Amazon Congo rainforests, *J. Geophys. Res. Atmos.*, <https://doi.org/10.1029/2019JD030962>, 2020,
25. Su, H., L. Wu, **J.H. Jiang**, R. Pai, A. Liu, A. Zhai, P. Tavallali, M. DeMaria, Applying Satellite Observations of Tropical Cyclone Internal Structures to Rapid Intensification Forecast with Machine Learning, *Geo. Res. Lett.*, <https://doi.org/10.1029/2020GL089102>, 2020.
26. Li, J., K. Xu, M. Richardson, W. Lee, **J.H. Jiang**, J. Yu, Y. Wang, E. Fetzer, L. Wang, G. Stephens, H. Liang, Annual and seasonal mean tropical and subtropical precipitation bias in CMIP5 and CMIP6 models, *Environmental Research Letters*, 15, 2021.
27. **Jiang, J.H.**, Global Warming Intensifies Turbulence Over Northern Eurasia, *Eos Editors' Highlight*, <https://eos.org/editor-highlights/global-warming-intensifies-turbulence-over-northern-eurasia>, 2021.
28. J. Li, K. Xu, W. Lee, **J.H. Jiang**, Y. Wang, E. Fetzer, J. Yu; L. Wang, Comparisons of radiation-circulation coupling over the tropical and subtropical ocean between AMIP6 and CMIP6, *Terrestrial, Atmospheric & Oceanic Sciences*, Vol. 32 Issue 1, p89-112. 24p, 2021
29. Yue, Q., **J.H. Jiang**, A. Heymsfield, K-N. Liou, Y. Gu, A. Sinha, Combining In-Situ and Satellite Observations to Understand the Vertical Structure of Tropical Anvil Cloud Microphysical Properties During the TC4 Experiment, *Earth and Space Science*, Vol. 7, Issue 4, <https://doi.org/10.1029/2020EA001147>, 2020.
30. Pan, B., Y. Wang, T. Logan, J. Hsieh, J.H. Jiang, Y. Li, R. Zhang, Determinant Role of aerosols from industrial sources in Hurricane Harvey's catastrophe, *Geo. Res. Lett.*, Vol. 47, Issue 23, 2020
31. Su, H., L. Wu, C. Zhai, **J.H. Jiang**, J. Neelin., Y. Yung, Observed tightening of tropical ascent in recent decades and linkage to regional precipitation changes. *Geo. Res. Lett.*, 47, <https://doi.org/10.1029/2019GL085809>, 2020.
32. Rooney, G.B., Y. Wang, J.H. Jiang, B. Zhao, Z. Zeng, J. Seinfeld, Air quality impact of the Northern California Camp Fire of November 2018, *Atmospheric Chemistry and Physics*, 2, 23, 2020.
33. **Jiang, J.H.**, Zero-valent Iron in the Oxidizing Atmosphere? AGU Eos, October 26, 2020, <https://eos.org/editor-highlights/zero-valent-iron-in-the-oxidizing-atmosphere>.
34. Wang, Y., T. Le, G. Chen, Y. Yung, H. Su, J. Seinfeld, **J.H. Jiang**, Reduced European aerosol emissions suppress winter extremes over northern Eurasia, *Nature Climate Change*, Vol. 10, 6, 2020.
35. Schiro, K., S. Sullivan, Y. Kuo, H. Su, P. Gentile, G. Elsaesser, **J.H. Jiang**, J.D. Neelin, Environmental controls on tropical mesoscale convective system precipitation intensity, *Journal of the Atmospheric Sciences*, <https://doi.org/10.1175/JAS-D-20-0111.1>, 2020.
36. Vignesh, P., **J.H. Jiang**, et al. Assessment of CMIP6 Cloud Fraction and Comparison with Satellite Observations, *Earth and Space Science*, <https://doi.org/10.1029/2019EA000975>, 2019. *EOS Research Spotlight*.
37. Chen, Y., J. Li, W. Lee, D. Diner, M. Garay, **J.H. Jiang**, Y. Wang, J. Yu, O. Kalashnikova, Evaluation of sea salt aerosols in climate systems: global climate modeling and observation-based analyses, *Environmental Research Letters*, 15, 3, 2020.
38. **Jiang, J.H.**, Using Machine Learning to Detect and Estimate Global Snowfall, *Eos Editors' Highlight*, <https://eos.org/editor-highlights/using-machine-learning-to-detect-and-estimate-global-snowfall>, 2020

39. Li, J., K. Xu, **J. H. Jiang**, Wei-Liang Lee, Li-Chiao Wang, Jia-Yuh Yu, Graeme Stephens, Eric Fetzer, Yi-Hui Wang, An Overview of CMIP5 and CMIP6 Simulated Cloud Ice, Radiation Fields, Surface Wind Stress, Sea Surface Temperatures and Precipitation over Tropical and Subtropical Oceans, *J. Geophys. Res.*, <https://doi.org/10.1029/2020JD032848>, 2020.
40. J. Li, W. Lee, K. Xu, **J.H. Jiang**, E. Fetzer, C. Chen, Y. Wang, J. Yu, P. Hsu, H. Hsu, The role of falling ice radiative effects on climate projections over Arctic under global warming, *Terr. Atmos. Ocean. Sci.*, Vol. 31, 633-648, 2020.
41. **Jiang, J.H.**, Ensemble Learning Estimates Terrestrial Water Storage Changes, *Eos Editors' Highlight*, <https://eos.org/editor-highlights/ensemble-learning-estimates-terrestrial-water-storage-changes>, 2020.
42. Chakraborty, S., **J.H. Jiang**, H. Su, R. Fu, Deep convective evolution from shallow clouds over the Amazon and Congo rainforests, *Journal of Geophysical Research: Atmospheres*, <https://doi.org/10.1029/2019JD030962>, 2020.
43. **Jiang, J.H.**, Q. Yue, H. Su, P. Kangaslahti, M. Lebsack, S. Reising, M. Schoeberl, L. Wu, R. Herman, Simulation of remote sensing of clouds and humidity from space using a combined platform of radar and multi-frequency microwave radiometers, *Earth and Space Science*, Vol. 6, Issue 7., doi:10.1002/2017EA000296, 2019. *EOS Research Spotlight*.
44. Fan, S., C. Li, J. Li, S. Bartlett, **J.H. Jiang**, V. Natraj, D. Crisp, and Y. Yung, Earth as an Exoplanet: A Two-dimensional Alien Map, *The Astrophysical Journal Letters*, Volume 882, Number 1, 2020
45. **Jiang, J.H.**, X. Ji, N. Cowan, R. Hu, Z. Zhu, Empirical Predictions for the Period Distribution of Planets to be Discovered by the Transiting Exoplanet Survey Satellite, *The Astronomical Journal*, vol. 158, No. 2, <https://iopscience.iop.org/article/10.3847/1538-3881/ab2a7a>, 2019.
46. Tian, E., H. Su, B. Tian, **J.H. Jiang**, Interannual variations of water vapor in the tropical upper troposphere and the lower and middle stratosphere and their connections to ENSO and QBO, *Atmos. Chem. Phys.*, 19, 9913–9926, <https://doi.org/10.5194/acp-19-9913-2019>, 2019.
47. Su, H., C. Zhai, **J.H. Jiang**, L. Wu, J. Neelin, Y. Yung, A dichotomy between model responses of tropical ascent and descent to surface warming, *Nature Climate and Atmospheric Science*, 2 (1), 2019
48. Zhao, B., Y. Wang, Y. Gu, K. Liou, **J.H. Jiang**, J. Fan, X. Liu, L. Huang, Y. Yung, Ice nucleation by aerosols from anthropogenic pollution, *Nature Geoscience*, volume 12, pages 602–607, 2019.
49. H. Shi, Z. Jiang, B. Zhao, Z. Li, Y. Chen, Y. Gu, **J.H. Jiang**, M. Lee, K. Liou, J. Neu, V. Payne, H. Su, Y. Wang, M. Witek, J. Worden, Modeling Study of the Air Quality Impact of Record-Breaking Southern California Wildfires in December 2017, Vol. 124, Issue 12, *J. Geophys. Res., Atmosphere*, doi:10.1029/2019 JD030472, 2019.
50. Li, J., S. Fan, P. Kopparla, C. Liu, **J. H. Jiang**, V. Natraj, Y. Yung, Study of Terrestrial Glints Based on DSCOVR Observations, *Earth and Space Science*, 6, 166-173, 10.1029/2018EA000509, 2019.
51. Dolinar, E., X. Dong, B. Xi, **J.H. Jiang**, N. Loeb, J. Campbell, H. Su, A global record of single-layered ice cloud properties and associated radiative heating rate profiles from an A-Train perspective, *Climate Dynamics*, <https://doi.org/10.1007/s00382-019-04682-8>, 2019.
52. Sung, K., E. Wishnow, T. Crawford, D. Nemchick, B. Drouin, G. Toon, S. Yu, V. Payne, J.H. Jiang, FTS measurements of O<sub>2</sub> collision-induced absorption in the 565–700 nm region using a high pressure gas absorption cell, *Journal of Quantitative Spectroscopy and Radiative Transfer*, Vol. 235, 2019.
53. Kubar, T., **J.H. Jiang**, Net Cloud Thinning, Low-Level Cloud Diminishment, and Hadley Circulation Weakening of Precipitating Clouds with Tropical West Pacific SST Using MISR and Other Satellite and Reanalysis Data, *Remote Sensing*, <https://doi.org/10.3390/rs11101250>, 2019.
54. Zhao, C., Y. Wang, X. Shi, D. Zhang, C. Wang, **J.H. Jiang**, Q. Zhang, H. Fan, Estimating the Contribution of Local Primary Emissions to Particulate Pollution Using High-Density Station Observations, *J. Geophys. Res., Atmospheres*, 124 (3), <https://doi.org/10.1029/2018JD028888>, 2019.
55. Li, J., M. Richardson, W. Lee, E. Fetzer, G. Stephens, **J.H. Jiang**, Y. Hong, Y. Wang, J. Yu, Y. Liu, Potential faster Arctic sea ice retreat triggered by snowflakes' greenhouse effect, *The Cryosphere*, 13, 969-980, 10.5194/tc-13-969-2019, 2019.

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57. Wang, Y., P. Ma, J. Peng, R. Zhang, **J.H. Jiang**, R. Easter, Y. Yung, Constraining aging processes of black carbon in the Community Atmosphere Model using environmental chamber measurements, *Journal of Advances in Modeling Earth Systems*, 10, 2514–2526, 10.1029/2018MS001387, 2018.
58. **Jiang, J.H.**, H. Su, L. Huang, Y. Wang, S. Massie, B. Zhao, A. Omar, Z. Wang, Contrasting Effects on Deep Convective Clouds by Different Types of Aerosols, *Nature Communications*, 9, 3874, doi:10.1038/s41467-018-06280-4, 2018. **NASA News Release.**
59. **Jiang, J.H.** and S. Zhu, A Planetary Mass and Stellar Radius Relationship for Exoplanets Orbiting Red Giants, *Res. Notes AAS*, 2, 4, doi:10.3847/2515-5172/aae48c, 2018.
60. **Jiang, J.H.**, A.J. Zhai, J. Herman, C. Zhai, R. Hu, H. Su, V. Natraj, J. Li, F. Xu, Y.L. Yung, Using Deep Space Climate Observatory Measurements to Study the Earth as An Exoplanet, *Astronomical Journal*, 156, 10.3847/1538-3881/aac6e2, 2018. **NASA News Release.**
61. Zhao, B., **Jiang, J.H.**, Diner, D. J., Su, H., Gu, Y., Liou, K.-N., Jiang, Z., Huang, L., Takano, Y., Fan, X., and Omar, A. H.: Intra-annual variations of regional aerosol optical depth, vertical distribution, and particle types from multiple satellite and ground-based observational datasets, *Atmos. Chem. Phys.*, 18, 11247-11260, <https://doi.org/10.5194/acp-18-11247-2018>, 2018.
62. Wang, Y., **J.H. Jiang**, H. Su, Y. Choi, L. Huang, Y. Yung, Elucidating the Role of Anthropogenic Aerosols in Arctic Sea Ice Variations. *J. Climate*, 31, DOI:10.1175/JCLI-D-17-0287.1, 2018.
63. Guo, J., Liu, H., Li, Z., Rosenfeld, D., Jiang, M., Xu, W., **Jiang, J. H.**, He, J., Chen, D., Min, M., and Zhai, P.: Aerosol-induced changes in the vertical structure of precipitation: a perspective of TRMM precipitation radar, *Atmos. Chem. Phys.*, 18, <https://doi.org/10.5194/acp-18-13329-2018>, 2018.
64. Wang, Y., J. Vogel, Y. Lin, B. Pan, J. Hu, Y. Liu, X. Dong, **J.H. Jiang**, Y. L. Yung, R. Zhang, Aerosol microphysical and radiative effects on continental cloud ensembles, *Advances in Atmos. Sci.*, 35(2), 234–247, <https://doi.org/10.1007/s00376-017-7091-5>, 2018.
65. Zhao, B., Liou, K.-N., Gu, Y., **Jiang, J.H.**, Li, Q., Fu, R., Huang, L., Liu, X., Shi, X., Su, H., and He, C., Impact of aerosols on ice crystal size, *Atmos. Chem. Phys.*, 18, 1065-1078, <https://doi.org/10.5194/acp-18-1065-2018>, 2018.
66. Basha, G., P. Kishore, M. Ratnam, S. Ravindrababu, I. Velicogna, **J.H. Jiang** and C. Ao, Global Climatology of Planetary Boundary Layer top obtained from multi-satellite GPS RO observations, *Climate Dynamics*, <https://doi.org/10.1007/s00382-018-4269-1>, 2018.
67. Wang, Y., P. Ma, J. Peng, R. Zhang, **J.H. Jiang**, R. Easter and Y. Yung, “Constraining Aging Processes of Black Carbon in the Community Atmosphere Model Using Environmental Chamber Measurements, *J. Adv. Model. Earth Syst.* 10, 2018.
68. Zhao, B., Y. Gu, K. Liou, Y. Wang, X. Liu, L. Huang, **J.H. Jiang**, Hui Su, Type-Dependent Responses of Ice Cloud Properties to Aerosols From Satellite Retrievals, *Geophys. Res. Lett.*, Vol. 45, <https://doi.org/10.1002/2018GL077261>, 2018.
69. A. Kao, X. Jiang, L. Li, J. Trammell, G. Zhang, H. Su, **J.H. Jiang**, and Y. Yung, A Comparative Study of Atmospheric Moisture Recycling Rate between Observations and Models, *Journal of Climate*, <https://doi.org/10.1175/JCLI-D-17-0421.1>, 2018.
70. Pan, B., Y. Wang, J. Hu, Y. Lin, J.-S. Hsieh, T. Logan, X. Feng, **J.H. Jiang**, Y. Yung, and R. Zhang, Impacts of Saharan Dust on Atlantic Regional Climate and Implications for Tropical Cyclones, *J. Climate* 31(8), 7621-7644, 2018.
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