

Hui Su

Jet Propulsion Laboratory, California Institute of Technology
Mail Stop 183-701, 4800 Oak Grove Drive, Pasadena, CA 91109
Work: (818) 393 7388; Mobile: (818) 398 9474; Fax: (818) 393 5065
Email: Hui.Su@jpl.nasa.gov

Education

- **Ph.D.** Atmospheric Sciences, University of Washington (1998)
- **B.S.** (summa cum laude), Atmospheric Dynamics, Peking University (1991)

Professional Experience

2017-present **Principal** in Climate and Climate System Modeling, Engineering and Science Directorate, Jet Propulsion Laboratory, California Institute of Technology, Pasadena, CA
2005-present **Scientist**, Jet Propulsion Laboratory, California Institute of Technology, Pasadena, CA
Level V (2015-present); Level IV (2007-2014); Level III (2006-2007); Contracting Scientist (2005-2006)
2015-present **Assistant Director**, Joint Institute for Regional Earth System Science and Engineering (JIFRESSE), University of California, Los Angeles, CA
2016-present **Adjunct Professor**, Dept. of Atmos. & Oceanic Sci., University of California, Los Angeles, CA
1998-2005 **Assistant Researcher**, Dept. of Atmos. Sci., University of California, Los Angeles, CA
1993-1998 **Research Assistant**, Dept. of Atmos. Sci., University of Washington, Seattle, WA
1994-1995 **Teaching Assistant**, Dept. of Atmos. Sci., University of Washington, Seattle, WA
1991-1993 **Research Assistant**, Dept. of Geophysics, Peking University, Beijing, China
1992-1993 **Teaching Assistant**, Dept. of Geophysics, Peking University, Beijing, China

Selected Awards

- **JPL Voyager Award** for coordinating the Science Visitor and Colloquium Program (2021)
- **JPL Voyager Award** for JIFRESSE Work (2018)
- **NASA Group Achievement Award** for Climate Sciences School Group Projects Design Team (2017)
- **JPL Team Bonus Award** for Senior Review Proposal Review Team (2017)
- **AGU Editor's Citation for Excellence in Refereeing** for Earth and Space Science (2015)
- **NASA Group Achievement Award for Hurricane and Severe Storm Sentinel Team** (2015)
- **JPL Team Bonus Award** for Senior Review Proposal Review (2015)
- **NASA Group Achievement Award for Aura MLS Team** (2014)
- **JPL Team Bonus Award** for Earth Ventures Proposal Team (2014)
- **JPL Team Bonus Award** for CMIP5 climate model evaluation publication (2012)
- **JPL Team Bonus Award** for EV-I proposal writing team (2012)
- **NASA Group Achievement Award for Genesis and Rapid Intensification Process (GRIP) Team** (2011)
- **NASA Exceptional Scientific Achievement Medal** for major advances in the understanding of water vapor and cloud feedbacks on climate change through quantitative analysis of observations from multiple NASA satellites (2010)
- **JPL Lew Allen Award for Excellence** (2008)
- **JPL Team Bonus Award** for Hurricane Team (2008)
- **NASA Group Achievement Award** for Aura MLS Science Team (2006)

Peer-Reviewed Publications (complete bibliography in the end)

- 118 peer-reviewed publications (including 3 book chapters), 24 first-authored
- 4368 total citations as of April 19, 2021
- H-index: 37 by Google Scholar
see Google Scholar <http://scholar.google.com/citations?user=AUJbpg0AAAAJ&hl=en>

Funded Research Projects (complete list on the next page)

- NASA ROSES: 6 as PI, 15 as Co-I
- NOAA: 1 as PI
- DOE: 1 as PI
- NSF: 1 as Co-I
- JPL internal proposals: 9 as PI, 3 as Co-I

Mentorship

- supervised/co-supervised 12 postdoctoral scholars
- mentored/co-mentored 21 summer students

Professional Activities

- 1) **Panel Member on Process Study and Model Improvement (PSMI) for US CLIVAR Program** (Feb 2021-Dec 2024)
- 2) **Editor for AGU Geophysical Research Letters** (January 2018 – Present)
- 3) **AMS STAC Committee for Tropical Meteorology and Tropical Cyclone** (January 2019 – Present; Vice Chair January 2020 – Present)
- 4) **Nominee for AGU Atmospheric Sciences Section Secretary** (2018)
- 5) **Proposal panel review**
 - NASA ROSES09-ACMAP, ROSES11-NIP, ROSES13-TERAQ, ROSES15-NIP, MUREP-MIRO (2018, 2019), NASA Earth and Space Science Fellowship (2010, 2013; 2019)
 - DOE-Office of Biological & Environmental Research: 2012, 2013
 - NSF Mail Review (Climate & Large-Scale Dynamics, Physical & Dynamic Meteorology): 2007, 2010, 2012, 2015, 2017, 2021
 - NOAA-MAPP review panel: 2021
 - JPL R&TD, SURP, DRDF, ISC, Data Science Pilots: 2007, 2009, 2010, 2011, 2012, 2013, 2015, 2019, 2020
 - JPL Earth Venture Mission Proposals: SABLE (2011), StormSat (2011), INVEST (2012), AREX (2013), SABLE (2015), Butterfly (2021)
 - JPL Flight Project Senior Review Proposal: MLS, AIRS, CloudSat, GRACE (2013, 2015, 2017, 2020)
- 3) **Journal article review**

Nature Climate Change, Nature Communications Earth & Environment, AGU/AMS journals, ACP, QJRMS, Climate Dynamics, Journal of the Meteorological Society of Japan (JMSJ), Review of Modern Physics, Journal of Meteorological Research: regularly

IPCC Sixth Assessment Report (AR6): Government Review and Expert Review (2020)
IPCC Fifth Assessment Report (AR5): Government Review and Expert Review (2012)
- 4) **Conference session convener/co-convener**
 - 1) AMS 35th Conference on Hurricanes and Tropical Meteorology (2022), Program Co-Chair
 - 2) AMS 34th Conference on Hurricanes and Tropical Meteorology (2021), “Convection”
 - 3) AMS Annual Meeting (2021), “Fourth Special Symposium on Tropical Meteorology and Tropical Cyclones”
 - 4) AMS Annual Meeting (2020), “Air Quality Forecasting of Pollution Episodes”
 - 5) AMS Annual Meeting (2019), “Interactions between Atmospheric Convection and Composition”
 - 6) AMS Annual Meeting (2017), “Atmospheric Convection: Observing Composition and Pollution Transport”
 - 7) AOGS (2016), “Climate Model Improvements In Clouds And Water Vapor Simulations”
 - 8) AMS Annual Meeting (2015), “Atmospheric Convection: Impact on Atmospheric Composition and Chemistry”
 - 9) AGU Fall Meeting (2014), “Constraining climate model simulations and predictions using observations
 - 10) AOGS (2014), “Climate feedbacks: observations, modeling and theory”, Sapporo, Japan
 - 11) AGU Fall Meeting (2013), “satellite measurements for climate model evaluation, diagnosis and improvements”
 - 12) AOGS-WPGM Joint Assembly (2012), “Asian aerosols and their impacts on regional and global climate”, Singapore City, Singapore
 - 13) CALIPSO-CloudSat-EarthCare joint workshop science committee co-chair, Paris, France (2012)
 - 14) Aura science team meeting, Boulder, CO (2010)
 - 15) AGU-WPGM (2010), “aerosol-cloud-precipitation relations: measurements and modeling”, Taipei, Taiwan
 - 16) AGU Fall Meeting (2008), “aerosol indirect effects: observations and modeling”
 - 17) AGU Fall Meeting (2006), “coordinated observations and modeling of global water vapor variability and its feedback to climate change”
- 5) **Invited talks at major conferences or university department seminars**
 - 1) Aug 1, 2019, AOGS Annual Meeting, Singapore, Singapore
 - 2) Aug 31, 2018, Nicholas School of the Environment, Duke University, Durham, NC
 - 3) Jul 5, 2018, 2nd WCRP Grand Challenge Meeting on Monsoons and Tropical Rain Belts, Trieste, Italy
 - 4) Feb 1, 2017, Dept. Atmos. & Oceanic Sci., University of California, Los Angeles
 - 5) Dec 12, 2016, AGU Fall Meeting, San Francisco, CA
 - 6) Oct 19, 2015, Dept. Environ. Sci. and Engineering, Ewha Womans University, Seoul, South Korea
 - 7) May 20, 2015, Monsoon Workshop, California Institute of Technology, Pasadena, CA
 - 8) Oct 16, 2013, Dept. Environ. Sci. and Engineering, Ewha Womans University, Seoul, South Korea
 - 9) Feb 5, 2013, Dept. of Atmos. Sci. Colloquia, Texas A&M University, College Station, TX
 - 10) Dec 7, 2012, AGU Fall Meeting, San Francisco, CA

- 11) Nov 6, 2012, Convection Workshop, Dept. of Atmos. Sci., Colorado State University, Fort Collins, CO
 - 12) Oct 18, 2012, Geophysical Fluid Dynamic Laboratory, Princeton University, Princeton, NJ
 - 13) Dec 8, 2011, AGU Fall Meeting, San Francisco, CA
 - 14) May 20, 2011, Convection Workshop, Dept. of Atmos. Sci., Colorado State University, Fort Collins, CO
 - 15) June 29, 2010, Dept. of Atmos. Sci. Colloquia, National Taiwan University, Taipei, Taiwan, ROC
 - 16) June 21, 2010, Research Center for Environmental Changes, Academia Sinica, Taipei, Taiwan, ROC
 - 17) Apr 16, 2009, Dept. of Atmos. Oceanic and Space Sci. Colloquia, University of Michigan, Ann Arbor, MI
 - 18) Aug 15, 2007, Laboratory of Atmospheres Distinguished Researcher Seminar Series, NASA Goddard Space Flight Center, Greenbelt, MD
 - 19) Aug 14, 2007, National Institute of Aerospace and NASA Langley Research Center Science Lecture Series, Hampton, VA
 - 20) Jul 24, 2006, AGU/Western Pacific Geophysics Meeting (WPGM), Beijing, China
 - 21) Apr 20, 2006, Dept. of Physics Colloquia, New Mexico Institute of Mining and Technology, Socorro, NM
- 6) **Other professional services**
- Science Working Group co-chair for the STP-H8 mission (2021-present)
 - JPL Extreme Weather Strategic Initiative Lead and PI (2016-2019)
 - JPL Lead on Developing Earth Venture Suborbital Mission (MC-CARDIO) Proposal (2017-2018)
 - JPL Principal Selection Review Committee (2018)
 - AGU GEC OSPA Coordinator (2016-2017)
 - JPL Earth Science Search Committee (2015-2016)
 - JPL Edward Stone Award Science Review Panel (2014)
 - JPL Science Visitor and Colloquium Program co-coordinator (2010-2021)
 - UCLA JIFRESSE Merit Increase Committee (2013-present)
 - JPL Earth Science Section Climate Club co-chair (2014-2015)
 - JPL Center for Climate Sciences (CCS) Atmospheric Composition & Convection Workshop co-lead (2014)
 - Aura Climate Working Group co-chair (2010-present)
 - JPL A-Team Study (Climate Models) co-lead (2013)
 - JPL Aerosol-Cloud Seminar coordinator (2010-2012)
 - Judge for JPL Postdoctoral Poster Award (August 2013) and Caltech SURF Competition (November 2013)
 - Chinese-American Engineers and Scientists Association of Southern California (CESASC) Board Chair (2019-20), President (2018-19), Vice President (2017-18), Award Committee Chair (2016-17), Scholarship Committee Chair (2015-16), Technical Symposium Committee Chair (2014-15)
 - Chinese-American Oceanic and Atmospheric Association (COAA) Southern California Chapter President (2015-2017), Secretary (2006-2009)

Funded Research Projects

- PI: DOE-RGMA, DE-FOA-0002230, Earth System Model Development and Analysis, \$769.708K, “The Role of Deep Convection and Large-scale Circulation in Driving Model Spread in Low Cloud Feedback and Equilibrium Climate Sensitivity”
- PI: NOAA-MAPP, FY20 Climate Sensitivity Competition, \$490.9K, “Linkage Between Deep Convection, Large-scale Circulation and Low Cloud Feedback”
- PI: NASA ROSES16-Atmospheric Composition: Aura Science Team and Atmospheric Composition Modeling and Analysis Program, \$735.94K, “Estimating Convective Entrainment Rates Using Aura CO to Guide GEOS-5 Convective Parameterization Improvements”
- PI: NASA ROSES13-NASA Energy and Water Cycle Study, \$460.48K, “Constraining Climate Sensitivity Through Quantification of Circulation-Cloud Feedback Using Satellite Observations and Reanalysis Data”
- PI: NASA ROSES13-Aura Science Team, \$360K, “Untangling Thermodynamic and Dynamic Control of Upper-Tropospheric Water Vapor Using Aura MLS Data and CMIP5 Model Simulations”
- PI: NASA ROSES10-NASA Energy and Water Cycle Study, \$258.7K, “Using NEWS Water and Energy Cycle Products to Investigate Processes that Control Cloud Feedback”
- PI: NASA ROSES10-Aura Science Team, \$691.9K, “Investigating the Influence of Asian Aerosol Pollution on the Water Vapor Transport from the Troposphere to the stratosphere”
- PI: NASA ROSES07-Aura Science Team, \$476.3K, “Radiative Impact of Cirrus Clouds on Tropical Troposphere to Stratosphere Transport”
- PI: JPL R&TD FY21, \$220K, “Developing a Coupled Weather-Composition OSSE System for Future Mission Formulations”
- PI: JPL Advanced Concept FY20, \$86K, “CIRAS AMV OSSE”
- PI: JPL Data Science Pilot Project FY20, \$50K, “Improving Hurricane Intensity Forecast Through Machine Learning of 3-D Satellite Data”
- PI: JPL Data Science Pilot Project FY19, \$50K, “Enhancing NASA Data Applications in High Societal Impact Areas Using IBM Watson”
- PI: JROC FY 18 and FY19 (JPL Researchers on Campus), \$25K/yr
- PI: JPL Strategic R&TD FY17, \$350K, “Extreme Weather Initiative”
- PI: JPL Advanced Concepts FY14, \$34.3K, “Observation System Simulation Experiment to Evaluate Impact of CubeSat using WRF 3D-Var Data Assimilation”
- PI: JPL R&TD FY08, \$137.4K, “Studying Tropical Cirrus Radiative Effect and its Climate Feedbacks using CloudSat and other A-Train Cloud Observations”
- PI: SURP DRDF FY06, \$43.6K, “Improving Our Understanding of Large-scale Dehydration Processes Near the Tropical Tropopause by Comparing MLS Observations and the GFDL AM2 Model Simulations”
- Co-I: JPL R&TD FY21, \$219.79K, “Maximize Europa Clipper Data Return by Accurate Prediction of Atmospheric Noise Temperature Using Machine Learning”, PI: Longtao Wu
- Co-I: JPL HBCU/MSI FY21, \$50K, “Spatiotemporal Entropy to Guide Targeted Meteorological Observations”, PI: Derek Posselt
- Co-I: JPL HBCU/MSI FY20, \$50K, “UAS-based Active Hurricane Sensing with Information-theoretic Path Planning”, PI: Hiro Ono
- Co-I/JPL PI: NASA ROSES19-Weather and Atmospheric Dynamics, \$740K (\$162K to JPL), “Interactions of Convection, Boundary Layer, and Wind in the Tropics: A NASA Field Campaign”, PI: Shuyi Chen (University of Washington)
- Co-I: NASA ROSES17-TASNPP, \$499.31K, (\$324.84K) “A Multi-Satellite Observational Analysis and CMIP6 Climate Model Evaluation of the Evolution of Clouds, Moisture and Precipitation On Sub-Daily to Intraseasonal Timescales”, PI: Gregory Elsaesser (GISS)
- Co-I/JPL PI: NASA ROSES16-Weather and Atmospheric Dynamics, \$459K (\$150K to JPL), “Convective Organization and Environmental Influence over Tropical Oceans: Convective Processes Experiment (CPEX)”, PI: Shuyi Chen (University of Miami)
- Co-I/JPL PI: NASA ROSES15-Precipitation Measurement Missions Science Team, \$150K (\$30K to JPL), “TRMM-GPM Precipitation Tracking and Water Cycle of the MJO”, PI: Shuyi Chen (University of Miami)
- Co-I: NASA ROSES15-CloudSat and CALIPSO Science Team Re compete, \$577.85K, “Interactions between Different Aerosol and Cloud Types as Determined by CALIPSO/CloudSat and A-Train Satellite Observations”, PI: Jonathan H. Jiang (JPL)
- Co-I: NASA ROSES14-Atmospheric Composition Modeling and Analysis, \$698.88K, “Climate Impact of Anthropogenic Emissions on Clouds, Precipitation and General Circulation”, PI: Jonathan H. Jiang (JPL)
- Co-I: NASA ROSES13-NASA Data for Operation and Assessment, \$426.56K, “Using NASA Data for Post-CMIP5 Earth System Model Assessment and Improvement”, PI: Jonathan H. Jiang (JPL)

- Co-I: NASA ROSES12-Modeling, Analysis and Prediction, \$999.23K, “Using A-Train Satellite Observations to Improve Cloud and Water Vapor Simulations in GISS Model-E”, PI: Jonathan H. Jiang (JPL)
- Co-I/JPL PI: NASA ROSES11-Hurricane Science Research Program, \$452.945K (\$100.24K to JPL), “Influence of environmental moisture on hurricane genesis and intensification: Observations and idealized modeling”, PI: Robert Fovell (UCLA)
- Co-I: NASA ROSES10-Enhancing the Capability of Computational Earth System Models and Data for Operation and Assessment, \$469.5K, “Utilizing NASA A-Train Datasets for IPCC AR5 Climate Model Evaluation”, PI: Jonathan H. Jiang (JPL)
- Co-I: NASA ROSES10-Aura Science Team, \$499.5K, “Utilizing Aura MLS and A-Train datasets to analyze and evaluate IPCC AR5 models in the upper troposphere”, PI: Jonathan H. Jiang (JPL)
- Co-I/JPL PI: NASA ROSES08-Hurricane Science Research Program, \$646.197K, (\$131.10K to JPL), “Investigation of tropical cyclone intensity change and genesis with EOS observations and cloud-resolving WRF model”, PI: Bin Wang (University of Hawaii)
- Co-I: NASA ROSES07-Accelerating Operational Use of Research Data, \$500.2K, “An Integrated Information System for Improving Operational Hurricane Forecasts”, PI: Svetla Hristova-Veleva (JPL)
- Co-I: NASA ROSES07-Aura Science Team, \$476.6K, “The Roles of Convection and Freeze-drying in the Tropical Tropopause Layer (TTL)”, PI: William G. Read (JPL)
- Co-I: NSF-Climate Dynamics and Physical Meteorology (2009-2012), \$514.015K, “Investigation of the Aerosol Indirect Effect on Ice Clouds and its Climate Impact Using A-Train Satellite Data and a GCM”, PI: Yu Gu (UCLA)
- Co-I: CloudSat Mission Operation (2010-present), approximately \$100K annually

Educational Activities

(1) Supervising postdoctoral scholars:

- Mengxi Wu (2021-present), UCLA JIFRESSE postdoctoral scholar
- Ni Dai (2021-present), UCLA JIFRESSE postdoctoral scholar
- Kathleen Schiro (2017-2020), JPL postdoctoral scholar/current Assistant Professor at University of Virginia
- Ryan Stanfield (2017-2019), JPL/Caltech postdoctoral scholar/current NOAA/NESDIS Scientist
- Run Liu (2016-2017), UCLA JIFRESSE postdoctoral scholar/current Assistant Professor at Jinan University, China
- Hanii Takahashi (2013-2015), Caltech postdoctoral scholar/current UCLA-JIFRESSE Researcher
- Longtao Wu (2010-2012), Caltech postdoctoral scholar/current JPL scientist

(2) Co-Supervising postdoctoral scholars with other scientists:

- Sudip Chakraborty (2018-present), JPL postdoctoral scholar
- Yuan Wang (2013-present), Caltech postdoctoral scholar/current Caltech Staff Scientist
- Lei Huang (2013-present), Caltech postdoctoral scholar/current JPL technologist
- Panagiotis Vergados (2013-2014), Caltech postdoctoral scholar/currently JPL scientist
- Jennifer Small (2009-2012), currently Assistant professor at University of Hawaii at Manoa
- Rohini Bhawar (2009-2011), currently Assistant professor at University of Pune, India

(3) Service on students’ thesis committee:

- Katrina L. Hui, Ph.D. candidate, California Institute of Technology (2019-present)
- Jennifer Walker, Ph.D., California Institute of Technology (2013-2016)

(4) Mentoring summer students:

(A) Graduates

- Jeyavinoh Jeyaratnam, City College of New York (2018)
- Ryan Stanfield, University of North Dakota (2016)
- Jung-Min Park, Ewha Womans University, Seoul, South Korea (2015)
- Hanii Takahashi, City University of New York, New York, New York (2012)
- Huiwen Chuang, University of Michigan, Ann Arbor, MI (2009)

(B) Undergraduates

- Noah Alviz, University of California, Los Angeles, CA (2020)
- Nicholas Tang, University of California, Berkeley, CA (2012)

(C) High school students

- Sarah Worden, Crescenta Valley High School, CA (2013)
- Teresa Jiang, La Canada High School, CA (2010)

(5) Co-Mentoring summer students:

(A) Graduates

- Jiwon Hwang, Ewha Womans University (2019-2020)
- Ryan Stanfield, University of North Dakota (2014)
- Patrick Brown, Duke University (2014; 2016)

- Erica Dolinar, University of North Dakota, ND (2013)
 - Daniel Russell, University of California, Los Angeles, CA (2013)
 - Lei Huang, University of Texas at Austin, Texas (2012)
- (B) Undergraduates**
- Edward Tian, University of California, Santa Cruz, CA (2018)
 - Katie Antilla, California Institute of Technology (2014)
 - David Qu, California Institute of Technology (2014)
 - Sze-Ning Mak, University of Hong Kong (2014)
 - Tiffany Chang, Brown University, RI (2013)
- (C) High school students**
- Nicholas Tang, La Canada High School, CA (2010)

Summary of Work as JIFRESSE Assistant Director 2015-2021

Hui Su

- **To initiate and pursue joint grant proposals between UCLA faculty and JPL scientists**
 - 1) Initiated a collaboration between UCLA atmospheric and public health researchers and JPL and obtained direct funding from UCLA Grand Challenge Program in 2016 to investigate California renewable energy policy impacts on human health and economy, which led to a \$900K proposal to EPA
 - 2) Played a major role in initiating and executing a project funded by California Energy Commission (CEC) in 2016-2017 to investigate the aerosol impacts on California precipitation and hydropower generation (\$250K), which led to a \$900K proposal submitted to CEC in October 2017
 - 3) Orchestrated a large (\$3.5M) proposal to NOAA to provide drought-related climate service for California and Nevada in 2017. Although not funded, this activity has established connections between JIFRESSE, UCLA Grand Challenge, Law School Department of Public Policy, the Institute of the Environment and Sustainability, and other institutions (UC Irvine, UC Davis)
 - 4) Working with JIFRESSE Associate Director Dr. Rong Fu on a potential NOAA Cooperative Institute proposal development in 2020
- **To organize seminars, workshops, and other types of educational activities of interest to UCLA and JPL**
 - 1) Have organized JIFRESSE seminar series at JPL and UCLA
 - 2) Have organized JIFRESSE annual open-house presentations, including keynote speeches and science showcases by researchers
 - 3) Prepared science highlights for Director's and Associate Director's presentations at JIFRESSE board meetings
 - 4) Initiated the JIFRESSE Summer Internship Program (JSIP) and led its successful implementation in 2018-2020, for which I received JPL Voyager Award in 09/2018
- **To serve as the Chair of JIFRESSE's Merit Increase Committee**
Chairing JIFRESSE researchers' out-of-step merit increase and promotion
- **To assist Director and Associate Director in developing academic and research matters of importance to both UCLA and JPL**
 - 1) Work with Earth Science Section management on policies pertaining to JIFRESSE affiliates (office space, term limit, hiring guidelines)
 - 2) Coordinate MOU renewal between JPL and UCLA
 - 3) Assist JIFRESSE website reconstruction, updates, science highlights, appointment of Assistant Director of Operations
- **To act as JPL liaison for JIFRESSE**
Communicate with JPL scientists about JIFRESSE policies and administrative procedures on hiring, office space, grant transfer, proposals, promotion, equipment purchase and others

Bibliography

Hui Su

1. Su, H., S. S. Chen and C. S. Bretherton: Three dimensional week-long simulation of TOGA-COARE convective systems using PSU/NCAR mesoscale model MM5. *J. Atmos. Sci.*, 56, 2326-2344, 1999.
2. Su, H., C. S. Bretherton and S. S. Chen: Self-aggregation and large-scale control of tropical deep convection. *J. Atmos. Sci.*, 57, 1797-1816, 2000.
3. Su, H., J. D. Neelin and C. Chou: Tropical teleconnection and local response to SST anomalies during the 1997-1998 El Niño. *J. Geophys. Res.*, 106, 20,025-20,043, 2001.
4. Zeng, N., J David Neelin, Chia Chou, Johnny Wei-Bing Lin, H. Su, *Climate and variability in the first quasi-equilibrium tropical circulation model*, Chapter 15, 457-488, Academic Press, 2001.
5. Chou, C., J. D. Neelin and H. Su: Ocean-atmosphere-land feedbacks in an idealized monsoon. *Quart. J. Roy. Meteor. Soc.*, 127, 1869-1891, 2001.
6. Su, H., and J. D. Neelin: Teleconnection mechanisms for tropical Pacific descent anomalies during El Niño. *J. Atmos. Sci.*, 59, 2682-2700, 2002.
7. Su, H., J. D. Neelin and J. E. Meyerson: Sensitivity of tropical tropospheric temperature to sea surface temperature forcing. *J. Climate*, 16, 1283-1301, 2003.
8. Neelin, J. D., C. Chou, and H. Su: Tropical drought regions in global warming and El Niño teleconnections. *Geophys. Res. Lett.*, 30(24) 2275, doi:10.1029/2003GL0018625, 2003.
9. Su, H., and J. D. Neelin: The scatter in tropical average precipitation anomalies. *J. Climate*, 16, 3966-3977, 2003.
10. Su, H., J. D. Neelin, and J. E. Meyerson: Tropical tropospheric temperature and precipitation response to sea surface temperature forcing. In *Ocean-Atmosphere Interaction and Climate Variability*. Geophysical Monograph Series, 147, 379-392. C. Wang, S.-P. Xie, J. Carton, eds., Amer. Geophys. Union, 2004.
11. Su, H. and J. D. Neelin: Dynamical mechanisms for African monsoon changes during the mid-Holocene. *J. Geophys. Res.*, 110, D19105, doi:10.1029/2005JD005806, 2005.
12. Neelin, J. D., and H. Su: Moist teleconnection mechanisms for the tropical South American and Atlantic sector during El Niño, *J. Climate*, 18, 3928-3950, 2005.
13. Su, H., J. D. Neelin and J. E. Meyerson: Mechanisms for lagged atmospheric response to ENSO SST. *J. Climate*, 18, 4195-4215, 2005.
14. Neelin, J. D., M. Munnich, H. Su, J. E. Meyerson, and C. Holloway: Tropical drying trends in global warming models and observations, *Proc. Nat. Acad. Sci.*, 103, 6110-6115, 2006.
15. Su, H., W.G. Read, J. H. Jiang, J.W. Waters, D.L. Wu, and E.J. Fetzer: Enhanced positive water vapor feedback associated with tropical deep convection: New evidence from Aura MLS, *Geophys. Res. Lett.*, 33, L05709, doi:10.1029/2005GL025505, 2006.
16. Su, H., D.E. Waliser, J.H. Jiang, J.-L. Li, W.G. Read, J.W. Waters, and A.M. Tompkins, 2006: Relationships of upper tropospheric water vapor, clouds and SST: MLS observations, ECMWF analyses and GCM simulations, *Geophys. Res. Lett.* 33, L22802, doi:10.1029/2006GL027582, 2006.
17. Lin, X., J.-L. F. Li, M. J. Suarez, A. M. Tompkins, D. E. Waliser, M. M. Rienecker, J. Bacmeister, J. H. Jiang, H.-T. Wu, C. M. Tassone, J.-D. Chern, B. Chen, H. Su, 2006: A View of Hurricane Katrina With Early 21st Century Technology, *Eos Trans. AGU*, 87(41), 433, 2006.
18. Liu, C., E. Zipser, T. Garrett, J. Jiang, H. Su: How do the water vapor and carbon monoxide “tape recorder” start near the tropical tropopause? *Geophys. Res. Lett.*, 34, L09804, doi:10.1029/2006GL029234, 2007.
19. Read, W.G., A. Lambert, J. Bacmeister, R.E. Cofield, L.E. Christensen, D.T. Cuddy, W.H. Daffer, B.J. Drouin, E. Fetzer, L. Froidevaux, R. Fuller, R. Herman, R.F. Jarnot, J.H. Jiang, Y.B. Jiang, K. Kelly, B.W. Knosp, H.C. Pumphrey, K.H. Rosenlof, X. Sabouchi, M.L. Santee, M.J. Schwartz, W.V. Snyder, P.C. Stek, H. Su, L.L. Takacs, R.P. Thurstans, H. Vomel, P.A. Wagner, J.W. Waters, C.R. Webster, E.M. Weinstock, and D.L. Wu, *Aura Microwave Limb Sounder upper tropospheric and lower stratospheric H₂O and relative humidity with respect to ice validation*, *J. Geophys. Res.* 112, D24S35, doi:10.1029/2007JD008752, 2007.
20. Jiang, J. H., N. J. Livesey, H. Su, L. Neary and J. C. McConnell, 2007: Connecting surface emissions, convective uplifting, and long-range transport of carbon monoxide in the upper-troposphere: New observations from Microwave Limb Sounder on Aura Satellite, *Geophys. Res. Lett.*, L18812, doi:10.1029/2007GL030638, 2007.
21. Fovell, R., and H. Su, Impact of cloud microphysics on hurricane track forecasts, *Geophys. Res. Lett.* 34, L24810, doi:10.1029/2007GL031723, 2007.
22. Su, H. J. H. Jiang, Y. Gu, J. D. Neelin, B. H. Kahn, D. Feldman, Y. L. Yung, J. W. Waters, N. J. Livesey, M. L. Santee, and William G. Read, Variations of tropical upper tropospheric clouds with sea surface temperature and implications for radiative effects, *J. Geophys. Res.*, doi:10.1029/2007JD009624, 2008.

23. Read, W.G., M.J. Schwartz, A. Lambert, H. Su, N.J. Livesey, W.H. Daffer, and C.D. Boone, "The Roles of Convection, Extratropical Mixing, and In-Situ Freeze-drying in the Tropical Tropopause Layer," *Atmos. Chem. Phys.*, 8, 6051--6067, 2008.
24. Fetzer, E. J., W. G. Read, D. Waliser, B. Kahn, B. Tian, H. Vömel, B. Irion, H. Su, A. Eldering, M. T. Juarez, J. H. Jiang, V. Dang: Comparison of Upper Tropospheric Water Vapor Observations from the Microwave Limb Sounder and Atmospheric Infrared Sounder, *J. Geophys. Res.*, 113, D22110, doi:10.1029/2008JD010000., 2008.
25. Jiang, J. H., H. Su, M. Schoeberl, S. T. Massie, P. Colarco, S. Platnick, N. J. Livesey: Clean and polluted clouds: relationships among pollution, ice cloud and precipitation in South America, *Geophys. Res. Lett.*, 35, L14804, doi:10.1029/2008GL034631, 2008.
26. Huang, X., and H. Su, Cloud radiative effect on tropical troposphere to stratosphere transport represented in a large-scale model, *Geophys. Res. Lett.*, 35, L21806, doi:10.1029/2008GL035673, 2008.
27. Su, H., J.H. Jiang, D.G. Vane, and G.L. Stephens, Observed Vertical Structure of Tropical Oceanic Clouds Sorted in Large-scale Regimes, *Geophys. Res. Lett.* 35, doi:10.1029/2008GL035888, 2008.
28. Su, H., J. H. Jiang, G.L. Stephens, D.G. Vane, and N.J. Livesey, Radiative effects of upper tropospheric clouds observed by Aura MLS and CloudSat, *Geophys. Res. Lett.*, 36, L09815, doi:10.1029/2009GL037173, 2009.
29. Jiang, J. H., H. Su, S. T. Massie, P. Colarco, M. Schoeberl, S. Platnick, Aerosol-CO Relationship and Aerosol Effect on Ice Cloud Particle Size: Analyses from Aura MLS and Aqua MODIS Observations, *J. Geophys. Res.*, 114, D20207, doi:10.1029/2009JD012421, 2009.
30. Su, H., J. H. Jiang, J. D. Neelin, B. Kahn, J. W. Waters, N. J. Livesey, and Y. Gu, Reply to comment by Roberto Rondanelli and Richard S. Lindzen on "Variations in convective precipitation fraction and stratiform area with sea surface temperature", *J. Geophys. Res.*, D06203, doi:10.1029/2009JD012872, 2010.
31. Jiang, J.H., H. Su, S. Pawson, H.C. Liu, W. Read, J.W. Waters, M. Santee, D.L. Wu, M. Schwartz, N. Livesey, A. Lambert, R. Fuller, and J.N. Lee, Five-year (2004-2009) Observations of Upper Tropospheric Water Vapor and Cloud Ice from MLS and Comparisons with GEOS-5 analyses, *J. Geophys. Res.*, 115, doi:10.1029/2009JD013256, 2010.
32. Jiang, J.H., H. Su, C. Zhai, S.T. Massie, M.R. Schoeberl, P.R. Colarco, S. Platnick, Y. Gu, and K.N. Liou, Influence of convection and aerosol pollution on ice cloud particle effective radius, *Atmos. Chem. Phys.* 11, 457-463, doi:10.5194/acp-11-457-2011, 2011.
33. Su, H., J. H. Jiang, X. Liu, J. E. Penner, W. G. Read, S. T. Massie, M. R. Schoeberl, P. Colarco, N. J. Livesey, and M. L. Santee, Observed Increase of TTL Temperature and Water Vapor in Polluted Clouds over Asia, *J. Climate*, 24, 2728-2736, doi: 10.1175/2010JCLI3749.1, 2011.
34. Su, H., J.H. Jiang, J. Teixeira, A. Gettelman, X. Huang, G. Stephens, D. Vane, and V.S. Perun, Comparison of Regime-Sorted Tropical Cloud Profiles Observed by CloudSat with GEOS5 Analyses and Two General Circulation Model Simulations, *J. Geophys. Res.*, 116, D09104, doi:10.1029/2010JD014971, 2011.
35. Wu, L., H. Su and J. H. Jiang, Regional simulations of deep convection and biomass burning over South America. Part I: Model evaluations using multiple satellite datasets. *J. Geophys. Res.*, 116, D17208, doi:10.1029/2011JD016105, 2011a.
36. Wu, L., H. Su and J. H. Jiang, Regional simulations of deep convection and biomass burning over South America. Part II: Biomass burning aerosol effects on clouds and precipitation. *J. Geophys. Res.*, 116, D17209, doi:10.1029/2011JD016106, 2011b.
37. Small, J.D., J.H. Jiang, and H. Su, Relationships of biomass burning aerosols with precipitation and cloud properties in Australia, *Geophys. Res. Lett.* 38, L23802, doi:10.1029/2011GL049404, 2011.
38. Gu, Y., K.N. Liou, J.H. Jiang, H. Su, and X. Liu, Dust aerosol impact on North Africa climate: a GCM investigation of aerosol-cloud-radiation interactions using A-Train satellite data, *Atmos. Chem. Phys.* 12, 1667-1679, doi:10.5194/acp-12-1667-2012, 2012.
39. Wu, L., H. Su, J.H. Jiang, and W.G. Read, Hydration or dehydration: competing effects of upper tropospheric cloud radiation on the TTL water vapor, *Atmos. Chem. Phys.*, 12, 7727-7735, 10.5194/acp-12-7727-2012, 2012.
40. Jiang, J.H., H. Su, C. Zhai, V.S. Perun, A. Del Genio, L.S. Nazarenko, L.J. Donner, L. Horowitz, C. Seman, J. Cole, A. Gettelman, M. Ringer, L. Rotstain, S. Jeffrey, T. Wu, F. Briant, J-L. Dufresne, H. Kawai, T. Koshiro, M. Watanabe, T. L'Ecuyer, W.G. Read, J.W. Waters, B. Tian, J.P. Teixeira, and G.L. Stephens, Evaluation of Cloud and Water Vapor Simulations in IPCC AR5 Climate Models Using NASA "A-Train" Satellite Observations, *J. Geophys. Res.*, 117, D14105, 24 PP, 10.1029/2011JD017237, 2012.
41. Wu, L., H. Su, R. G. Fovell, B. Wang, J. T. Shen, B. H. Kahn, S. M. Hristova-Veleva, B. H. Lambrigtsen, E. J. Fetzer, and J. H. Jiang, Relationship of environmental relative humidity with North Atlantic tropical cyclone intensity and intensification rate, *Geophys. Res. Lett.*, 39, L20809, doi:10.1029/2012GL053546, 2012.

42. Su, H., and J.H. Jiang, Tropical Clouds and Circulation Changes During the 2006-07 and 2009-10 El Niños, *J. Climate*, 26, 399–413, doi:10.1175/JCLI-D-12-00152.1, 2013.
43. Su, H., J. H. Jiang, C. Zhai, V.S. Perun, J.T. Shen, A. Del Genio, L.S. Nazarenko, L.J. Donner, L. Horowitz, C. Segan, C. Morcrette, J. Petch, M. Ringer, J. Cole, M. Mesquita, T. Iversen, J.E. Kristjansson, A. Gettelman, L. Rotstain, S. Jeffrey, J.L. Dufresne, M. Watanabe, H. Kawai, T. Koshiro, T. Wu, E.M. Volodin, T. L'Ecuyer, J. Teixeira, and G.L. Stephens, Diagnosis of Regime-dependent Cloud Simulation Errors in CMIP5 Models Using “A-Train” Satellite Observations and Reanalysis Data, *J. Geophys. Res.*, 118, 7, 2762–2780, 10.1029/2012JD018575, 2013.
44. Huang, L., J.H. Jiang, J.L. Tackett, H. Su, and R. Fu, Seasonal and Diurnal Variations of Aerosol Extinction Profile and Type Distribution from CALIPSO 5-year Observations, *J. Geophys. Res.*, 118, 10, 4572–4596, doi:10.1002/jgrd.50407, 2013.
45. Vergados P., A. Mannucci, H. Su, A validation study for GPS radio occultation data with moist thermodynamic structure of tropical cyclones, *J. Geophys. Res.*, 118, 9401–9413, doi: 10.1002/jgrd.50698, 2013.
46. Wu, L., H. Su, and J. H. Jiang, Regional simulation of aerosol impacts on precipitation during the East Asian summer monsoon, *J. Geophys. Res.*, 118, 6454–6467, doi: 10.1002/jgrd.50527, 2013.
47. Takahashi, H., H. Su, J. H. Jiang, Z. Luo, S.-P. Xie, and J. Hafner, Tropical Water Vapor Variations During the 2006-07 and 2009-10 El Niños: Satellite Observation and GFDL AM2.1 Simulation, *J. Geophys. Res.*, 118, 16, 8910–8920, doi:10.1002/jgrd.50684, 2013.
48. Bhawar, R. L., J. H. Jiang, H. Su, and M. J. Schwartz, Variation of upper tropospheric clouds and water vapour over the Indian Ocean, *Int. J. Climatol*, DOI: 10.1002/joc.3942, 2014.
49. Dolinar, E. K., X. Dong, B. Xi, J. H. Jiang and H. Su, Evaluation of CMIP5 Simulated Clouds and TOA Radiation Budgets Using NASA Satellite Observations, *Climate Dynamics*, DOI: 10.1007/s00382-014-2158-9, 2014.
50. Lebsock, M., and H. Su, Application of Active Spaceborne Remote Sensing for Understanding Biases Between Passive Cloud Water Path Retrievals, *J. Geophys. Res.*, 119, 8962–8979, doi:10.1002/2014JD021568, 2014.
51. Su, H., J. H. Jiang, C. Zhai, T. J. Shen, J. D. Neelin, G. L. Stephens, and Y. L. Yung, Weakening and strengthening structures in the Hadley Circulation change under global warming and implications for cloud response and climate sensitivity, *J. Geophys. Res.*, 119, 5787–5805, doi:10.1002/2014JD021642, 2014.
52. Jiang, J.H., H. Su, C. Zhai, T.J. Shen, T. Wu, J. Zhang, J. Cole, von Salzen, L.J. Donner, C. Segan, A. Del Genio, L.S. Nazarenko, J.L. Dufresne, M. Watanabe, C. Morcrette, T. Koshiro, H. Kawai, A. Gettelman, L. Millán, W.G. Read, N.J. Livesey, Y. Kasai, and M. Shiotani, Evaluating the diurnal cycle of upper tropospheric ice clouds in climate models using SMILES observations, *J. Atmos. Sci.*, 72, 1022–1044, doi:10.1175/JAS-D-14-0124.1, 2015.
53. Ao, C., J. H. Jiang , A. Mannucci , H. Su, O. Verkhoglyadova , C. Zhai , J. Cole , L. Donner , T. Iversen , C. Morcrette , L. Rotstain , M. Watanabe , and S. Yukimoto, Evaluation of CMIP5 upper troposphere geopotential height with GPS radio occultation observations, *J. Geophys. Res.*, doi:10.1002/2014JD022239, 2015.
54. Vergados, P., A. Mannucci, C. Ao, J.H. Jiang, and H. Su, On the comparisons of tropical relative humidity in the lower and middle troposphere among COSMIC radio occultations and MERRA and ECMWF data sets, *Atmospheric Measurement Techniques* 8, 1789–1797, doi:10.5194/amt-8-1789-2015, 2015.
55. Wang, Y., J.H. Jiang, and H. Su, Atmospheric Responses to the Redistribution of Anthropogenic Aerosols, *J. Geophys. Res.* doi:10.1002/2015JD023665, 2015.
56. Huang, L., J. H. Jiang, Z. Wang, H. Su, M. Deng, and S. Massie, Climatology of Cloud Water Content Associated with Different Cloud Types Observed by A-Train Satellites, *J. Geophys. Res.*, 120, doi:10.1002/2014JD022779, 2015.
57. Jiang, X., E. T. Olsen, T. S. Pagano, H. Su, and Y. L. Yung, Modulation of mid-tropospheric CO₂ by the South Atlantic Circulation, *J. Atmos. Sci.*, doi:10.1175/JAS-D-14-0340.1, 2015.
58. Zhai, C., J.H. Jiang, and H. Su, Long term cloud change imprinted in seasonal cloud variation: more evidence of high climate sensitivity, *Geophys. Res. Lett.*, 42, 8729–8737, doi:10.1002/2015GL065911, 2015.
59. Jiang, J.H., H. Su, C. Zhai, L. Wu, K. Minschwaner, A.M. Molod, and A.M. Tompkins, An assessment of upper-troposphere and lower-stratosphere water vapor in MERRA, MERRA2 and ECMWF reanalyses using Aura MLS observations, *J. Geophys. Res.*, doi:10.1002/2015JD023752, 2015.
60. Wu, L., H. Su, R. G. Fovell, T. J. Dunkerton, Z. Wang, and B. H. Kahn, Impact of environmental moisture on tropical cyclone intensification, *Atmos. Chem. Phys.*, 15, 14041–14053, doi:10.5194/acp-15-14041-2015, 2015.
61. Takahashi, H., H. Su, and J.H. Jiang, Error analysis of upper tropospheric water vapor in CMIP5 models using “A-Train” satellite observations and reanalysis data, *Climate Dynamics*, 46, 2787–2803, doi:10.1007/s00382-015-2732-9, 2016a.

62. Brown, P.T., W. Li, J.H. Jiang, and H. Su, Unforced surface air temperature anomalies and their opposite relationship with the TOA energy imbalance at local and global scales, *J. Climate*, 29, 925–940, doi: <http://dx.doi.org/10.1175/JCLI-D-15-0384.1>, 2016.
63. Fovell, R. G., Y. P. Bu, K. L. Corbosiero, W.-W. Tung, Y. Cao, H. C. Kuo, L.-H. Hsu, and H. Su, Influence of cloud microphysics and radiation on tropical cyclone structure and motion: A review, *AMS Michio Yanai Symposium Monograph*, DOI: 10.1175/AMSMONOGRAPHIS-D-15-0006.1, 2016.
64. Stanfield R., J. H. Jiang, X. Dong, B. Xi, H. Su, L. Donner, L. Rotstayn, T. Wu, J. Cole and E. Shindo, A Quantitative Assessment of Precipitation Associated With the ITCZ in the CMIP5 GCM Simulations, *Climate Dynamics*, 47, 1863–1880, doi:10.1007/s00382-015-2937-y, 2016.
65. Takahashi, H., H. Su, and J. H. Jiang, Water Vapor Changes Under Global Warming and the Linkage to Present-day Interannual Variabilities in CMIP5 Models, *Climate Dynamics*, 47, 3673–3691, 10.1007/s00382-016-3035-5, 2016b.
66. Minschwaner, K., H. Su, and J. H. Jiang, The Upward Branch of the Brewer–Dobson Circulation Quantified by Tropical Stratospheric Water Vapor and Carbon Monoxide Measurements from the Aura Microwave Limb Sounder, *J. Geophys. Res.*, 10.1002/2015JD023961, 2016.
67. Wang, Y., P.-L. Ma, J.H. Jiang, and H. Su, Toward reconciling the influence of atmospheric aerosols and greenhouse gases on light precipitation changes in Eastern China, *J. Geophys. Res. Atmos.*, 121, 5878–5887, doi:10.1002/2016JD024845, 2016.
68. Huang, L., J. H. Jiang, L. Murray, M. Damon, H. Su, and Nathaniel Livesey, Evaluation of UTLS carbon monoxide simulations in GMI and GEOS-Chem chemical transport models using Aura MLS observations, *Atmos. Chem. Phys.*, 16, 5641–5663, doi:10.5194/acp-16-5641-2016, 2016.
69. Kahn, B. H., X. Huang, G. L. Stephens, W. D. Collins, D. R. Feldman, H. Su, S. Wong, and Q. Yue, ENSO regulation of far- and mid-infrared contributions to clear-sky OLR, *Geophys. Res. Lett.*, 43, 8751–8759, doi:10.1002/2016GL070263, 2016.
70. Brown, P., W. Li, J. H. Jiang, H. Su, Spread in the magnitude of climate model interdecadal global temperature variability traced to disagreements over high-latitude oceans, *Geophys. Res. Lett.*, doi: 10.1002/2016GL071442, 2016.
71. Li, K.-F., H. Su, S.-N. Mak, T. M. Chang, J. H. Jiang, J. R. Norris, and Y. L. Yung, An Analysis of High Cloud Variability: Imprints from the El Niño–Southern Oscillation, *Climate Dynamics*, 48, 447–457, DOI 10.1007/s00382-016-3086-7, 2017.
72. Wang, Y., H. Su, J. H. Jiang, N. J. Livesey, M. L. Santee, L. Froidevaux, W. G. Read and J. Anderson, The linkage between stratospheric water vapor and surface temperature in an observation-constrained coupled general circulation model, *Climate Dynamics*, 48, 2671–2683, 10.1007/s00382-016-3231-3, 2017.
73. Su, H., J. H. Jiang, J. David Neelin, T. Janice Shen, C. Zhai, Qing Yue, Zhien Wang, Lei Huang, Yong-Sang Choi, Graeme L. Stephens, Yuk L. Yung, Tightening of tropical ascent and high clouds key to precipitation change in a warmer climate, *Nature Communications*, 8, 15771, doi: 10.1038/ncomms15771, 2017. NASA Press Release: <http://www.jpl.nasa.gov/news/news.php?release=2017-164>
74. Zhao, B., J. H. Jiang, Y. Gu, D. Diner, J. Worden, K.-N. Liou, H. Su, J. Xing, M. Garay, L. Huang, Decadal-scale trends in regional aerosol particle properties and their association with emission changes, *Env. Res. Lett.* 12, 054021, 2017.
75. Jiang, J. H., Q. Yue, H. Su, P. P. Kangaslahti, S. C. Reising, W. R. Deal, E. T. Schlecht, L. Wu, K. F. Evans, A Simulation of Ice Cloud Particle Size, Humidity and Temperature Measurements from the TWICE CubeSat, *Earth Space Sci.*, 4, 574–587, doi:10.1002/2017EA000296, 2017.
76. Kao, A., X. Jiang, L. Li, H. Su, Y.-L. Yung, Precipitation, circulation and cloud variability over the past two decades, *Earth and Space Science*, 4, 597–606, doi:10.1002/2017EA000319, 2017.
77. Wu, L. H. Su, O. Kalashnikova, J. H. Jiang, C. Zhao, M. Garay, J. Campbell, and N. Yu, WRF-Chem simulation of aerosol seasonal variability in the San Joaquin Valley, *Atmos. Chem. Phys.*, 17, 7291–7309, <https://doi.org/10.5194/acp-17-7291-2017>, 2017.
78. Liu, R., K.-N. Liou, H. Su, Y. Gu, B. Zhao, J. H. Jiang, High cloud variations with surface temperature from 2002 to 2015: Contributions to atmospheric radiative cooling rate and precipitation changes, *J. Geophys. Res.*, 122, 5457–5471, doi:10.1002/2016JD026303, 2017.
79. Zhao, B., K.-N. Liou, Y. Gu, Q. Li, J. H. Jiang, H. Su, C. He, H.-L. R. Tseng, S. Wang, R. Liu, L. Qi, and J. Hao, Enhanced air pollution in China due to aerosol-cloud interactions, *Scientific Reports*, 7, 4453, doi:10.1038/s41598-017-04096-8, 2017.
80. Zhao, B., K.-N. Liou, Y. Gu, J. H. Jiang, Q. Li, R. Fu, L. Huang, X. Liu, X. Shi, H. Su, C. He, Impact of aerosols on ice crystal size, *Atmos. Chem. Phys.*, 18, 1065–1078, doi: 10.5194/acp-18-1065-2018, 2018.
81. Wang, Y., J. H. Jiang, H. Su, Y. Choi, L. Huang, Y. L. Yung, Elucidating the Role of Anthropogenic Aerosols In the Arctic Sea Ice Variations, *J. Climate*, doi.org/10.1175/JCLI-D-17-0287.1, 2018.

82. Hwang, J., Y. Choi, W. Kim, H. Su, and J. H. Jiang, Observational estimation of radiative feedback to surface air temperature over northern high latitudes, *Climate Dynamics*, 50, 615-628, 10.1007/s00382-017-3629-6, 2018.
83. Qu, X., A. Hall, A. M. DeAngelis, M. D. Zelinka, S. A. Klein, H. Su, B. Tian, C. Zhai., On the emergent constraints of climate sensitivity, *J. Climate*, 31, 863-875, doi:10.1175/JCLI-D-17-0482.1, 2018.
84. Liu, R., H. Su, K.-N. Liou, J. H. Jiang, Y. Gu, S.-C. Liu, and C.-J. Shiu, An assessment of tropospheric water vapor feedback using radiative kernels, *J. Geophys. Res.*, 123, 1499-1509, doi: 10.1002/2017JD027512, 2018.
85. Kao, A., X. Jiang, L. Li, J. H. Trammell, G. J. Zhang, H. Su, J. H. Jiang, Y.-L. Yung, A Comparative Study of Atmospheric Moisture Recycling Rate Between Observations and Models, *J. Climate*, 4, 597-606, doi: 10.1175/JCLI-D-17-0421.1, 2018.
86. Lambriksen, B., V. Dang, J. Turk, S. Hristova-Veleva, H. Su, Y. Wen, All-Weather Tropospheric 3D Wind from Microwave Sounders, *Journal of Selected Topics in Applied Earth Observations and Remote Sensing (J-STARS)*, Volume 11, Issue 6, 1939-1404, 10.1109/JSTARS.2018.2814540, 2018.
87. Wu, L., Y. Gu, J. H. Jiang, H. Su, et al., Impacts of Aerosols on Precipitation and Snowpack in California based on WRF-Chem-SNICAR simulations, *Atmos. Chem. Phys.*, 18, 5529-5547, doi:10.5194/acp-18-5529-2018, 2018.
88. Zhao, B., Y. Gu, K.-N. Liou, Y. Wang, X. Liu, L. Huang, J. H. Jiang and H. Su, Type-dependent responses of ice cloud properties to aerosols from satellite retrievals, *Geophys. Res. Lett.*, 45, 3297-3306. doi:10.1002/2018GL077261, 2018.
89. Zhao, B, Jiang JH, Diner DJ, Su H, Gu Y, Kuo-Nan Liou, Jiang Z, Huang L, Takano Y, Fan X, et al. Intraannual variations of regional aerosol optical depth, vertical distribution, and particle types from multiple satellite and ground-based observational datasets. *Atmospheric Chemistry and Physics*, 18(15):11247, 2018.
90. Jiang, J. H., A. J. Zhai, J. R. 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, *The Astronomical Journal*, 156:26 (17pp), doi:10.3847/1538-3881/aac6e2, 2018.
91. Kabir, F., N. Yu, W. Yao, L. Wu, J. H. Jiang, Y. Gu, H. Su, Impact of Aerosols on Reservoir Inflow: A Case Study for Big Creek Hydroelectric System in California, *Hydrological Processes*, 10.1002/hyp.13265, 2018.
92. 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, doi:10.1038/ s41467-018-06280-4, 2018.
93. Allen, R., T., T. Hassan, Cynthia A. Randles, and H. Su, Enhanced land-sea warming contrast elevates aerosol pollution in a warmer world, *Nature Climate Change*, doi:10.1038/s41558-019-0401-4, 2019.
94. 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*, doi:10.1007/s00382-019-04682-8, 2019.
95. Su, H., C. Zhai, J. H. Jiang, L. Wu, J. D. Neelin, Y.-L. Yung, A dichotomy between model responses of tropical ascent and descent to surface warming, *npj Climate and Atmospheric Science*, doi:10.1038/s41612-019-0066-8, 2019.
96. Tian, E. T., H. Su, B. Tian, and 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.*, doi: 10.5194/acp-2018-1010, 2019.
97. Jiang., J. H., Q. Yue, H. Su, P. Kangaslahti, M. Lebsock, S. Reising, M. Schoeberl, L. Wu, R. L. Herman, F. Evans, Simulation of cloud and moisture remote sensing from a combined platform of radar and multi-frequency microwave radiometers from space, *Earth and Space Science*, doi:10.1029/2019EA000580, 2019.
98. Shi, H., B. Zhao, Z. Jiang, Z. Li, Y. Chen, Y. Gu, J. H. Jiang, M. Lee, K.-N. Liou, J. L. Neu, V. H. Payne, H. Su, Y. Wang, M. Witek, and J. R. Worden, Modeling study of the air quality impact of record-breaking Southern California wildfires in December 2017, *J. Geophys. Res.-Atmospheres*, doi:10.1029/2019JD030472, 2019.
99. Stanfield, R.S., H. Su, J. H. Jiang, S. R. Freitas, A. M. Molod, Z. J. Luo, L. Huang, M. Luo, Convective entrainment rates estimated from Aura CO and CloudSat/CALIPSO observations and comparison with GEOS-5, *J. Geophys. Res.-Atmospheres*, doi:10.1029/2019JD030846, 2019.
100. Schiro, K. A., H. Su, Y. Wang, B. Langenbrunner, J. H. Jiang, and J. D. Neelin, Relationships between tropical ascent and high cloud fraction changes with warming revealed by perturbation physics experiments in CESM, *Geophys. Res. Lett.*, doi:10.1029/2019GL083026, 2019.
101. Hwang, J., Y.-S. Choi, C. Yoo, Y. Wang, H. Su, J. H. Jiang, Interpretation of the top-of-Atmosphere energy flux for future Arctic Warming, *Scientific Reports*, doi: 10.1038/s41598-019-49218-6, 2019.
102. Wang, T., B. Zhao, K.-N. Liou, Y. Gu, Z. Jiang, K. Song, H. Su, M. Jerrett, Y. Zhu, Mortality Burdens in California Due to Air Pollution Attributable to Local and Non-local Emissions, *Environment International*, doi:10.1016/j.envint.2019.105232, 2019.

103. Posselt, D. J., L. Wu, K. Mueller, L. Huang, F. W. Irion, S. Brown, H. Su, D. Santek, C. S. Velden, Quantitative Assessment of State-Dependent Atmospheric Motion Vector Uncertainties, *J. Appl. Meteor. Clim.*, doi:10.1175/JAMC-D-19-0166.1, 2019.
104. Chakraborty, S., J. H. Jiang, H. Su, R. Fu, Deep Convective Evolution from Shallow Clouds over the Tropical Rainforests, doi:10.1029/2019JD030962, *J. Geophys. Res.-Atmospheres*, 2019.
105. Jiang, X., H. Su, and D. E. Waliser, A Damping Effect of the Maritime Continent for the Madden-Julian Oscillation, doi:10.1029/2019JD031503, 124, 24, *J. Geophys. Res. - Atmospheres*, 2019.
106. Choi, Y.-S., J. Hwang, J. Ok, D.-S. R. Park, H. Su, J. H. Jiang, L. Huang, and T. Limpasuvan, The effect of Arctic clouds on the ice-albedo feedback in midsummer, doi:10.1002/joc.6469, *International Journal of Climatology*, 2019.
107. Vignesh, P. P., J. H. Jiang, P. Kishore, H. Su, T. Smay, N. Brighton, I. Velicogna, An Assessment of CMIP6 Model Simulated Cloud Fraction and Comparison With Satellite Observations, doi:10.1029/2019EA000975, *Earth and Space Science*, 2020.
108. Wang, Y., T. Le, G. Chen, Y. L. Yung, H. Su, J. H. Seinfeld, J. H. Jiang, Reduced European aerosol emissions suppress winter extremes over northern Eurasia, doi:10.1038/s41558-020-0693-4, *Nature Climate Change*, 2020.
109. Su, H., Wu, L., Zhai, C., Jiang, J. H., Neelin, J. D., & Yung, Y. L. (2020). Observed tightening of tropical ascent in recent decades and linkage to regional precipitation changes, doi:10.1029/2019GL085809, *Geophysical Research Letters*, 2020.
110. Wang, Y., H. Su, J. H. Jiang, F. Xu, Y. L. Yung, Impact of Cloud Ice Particle Size Uncertainty in A Climate Model and Implications for Future Satellite Missions, doi:10.1029/2019JD032119, *J. Geophys. Res. - Atmospheres*, doi:10.1029/2019JD032119, 2020.
111. Hristova-Veleva, Svetla M., P. Peggy Li, Brian Knosp, Quoc A. Vu, F. Joseph Turk, William L. Poulsen, Ziad S. Haddad, Bjorn H. Lambriksen, Bryan W. Stiles, Tsae-Pyng J. Shen, Noppasin Niamsuwan, Simone Tanelli, Ousmane O. Sy, Eun-Kyoung Seo, Hui Su, Deborah G. Vane, Yi Chao, Philip S. Callahan, R. Scott Dunbar, Michael Montgomery, Mark Boothe, Vijay Tallapragada, Samuel Trahan, Anthony J. Wimmers, Robert Holz, Jeffrey Reid; Frank Marks, Tomislava Vukicevic, Saiprasanth Bhalachandran, Hua Leighton, Sundararaman G. Gopalakrishnan, Andres Navarro, Francisco J. Tapiador, An Eye on the Storm: Integrating a Wealth of Data for Quickly Advancing the Physical Understanding and Forecasting of Hurricanes, *Bull. Amet. Meteo. Sci.*, doi: <https://doi.org/10.1175/BAMS-D-19-0020.1>, 2020.
112. Jiang, X., E. Maloney, H. Su, Large-scale controls of propagation of the Madden-Julian Oscillation, *npj Climate and Atmospheric Science*, 3, 29 (2020). <https://doi.org/10.1038/s41612-020-00134-x>, 2020.
113. Su, H., L. Wu, J. H. Jiang, R. Pai, R., A. Liu, A. J. Zhai, P. Tavallali, and M. DeMaria, Applying satellite observations of tropical cyclone internal structures to rapid intensification forecast with machine learning. *Geophysical Research Letters*, 47, e2020GL089102, <http://dx.doi.org/10.1029/2020GL089102>, 2020. NASA press release, <https://www.jpl.nasa.gov/news/news.php?feature=7738>.
114. Schiro, K. A., S. C. Sullivan, Y.-H. Kuo, H. Su, P. Gentine, G. S. Elsaesser, J. H. Jiang, J. D. Neelin, Environmental controls on tropical mesoscale convective system precipitation intensity, *J. Atmos. Sci.*, doi:10.1175/JAS-D-20-0111.1, 2020.
115. Hwang, J. Y.-S. Choi, H. Su, J. H. Jiang, Invariability of Arctic top-of-atmosphere radiative response to surface temperature changes, *Earth and Space Science*, doi:10.1029/2020EA001316, 2020.
116. Teixeira, J. V., H. Nguyen, D. J. Posselt, H. Su, and L. Wu, Uncertainty Quantification for Atmospheric Motion Vectors with Machine Learning, *Atmospheric Measurement Techniques*, doi.org/10.5194/amt-2020-95, 2020.
117. Hristova-Veleva, S., Z. Haddad, A. Chau, B. W. Stiles, F. J. Turk, P. P. Li, B. Knosp, Q. Vu, T.-P. Shen, B. Lambriksen, E. Rodriguez, E.-K. Seo, H. Su, Impact of microphysical parameterizations on the structure and intensity of simulated hurricanes: Using satellite data to determine the Particle Size Distributions that produce most realistic storms, *Atmosphere* 2021, 12(2), 154; <https://doi.org/10.3390/atmos12020154>, 2021.
118. Jiang, J.H., H. Su, L. Wu, C. Zhai, K. A. Schiro, Improvements in cloud and water vapor simulations over the tropical oceans in CMIP6 compared to CMIP5, *Earth Space Science*, doi:10.1002/2021EA001520, 2021.