

## **Curriculum Vitae of Dr. Xiquan Dong**

Department of Hydrology and Atmospheric Sciences, University of Arizona, Tucson, AZ 85721-0011  
Phone: 520-621-4652; Email: [xdong@email.arizona.edu](mailto:xdong@email.arizona.edu); Homepage: [xiquandong.faculty.arizona.edu](http://xiquandong.faculty.arizona.edu)

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### **1. Educational Background**

Ph. D., Meteorology, 1996, Pennsylvania State University.  
BS, Electrical Engineering, 1983, Tianjin University.

### **2. Professional Experience**

June-July 2019: Visiting professor at National Taiwan University.  
2016- : Professor, University of Arizona  
2011- 2016: Professor, University of North Dakota  
10/2011-03/2012: Visiting professor, University of Tokyo  
2006- 2011: Associate professor, University of North Dakota  
2002-2006: Assistant professor, University of North Dakota  
1999-2002: Research assistant professor, University of Utah.  
1996-1999: Research scientist, NASA Langley Research Center, Hampton, VA.  
1991-1996: Research assistant, Pennsylvania State University.  
1983-1991: Electrical engineer, Chinese Academy of Meteorological Sciences, Beijing.

### **3. Current scientific interests**

- Developing the cutting-edge cloud retrieval techniques using ground-based remote sensing and aircraft in situ measurements.
- Developing innovative methods to validate satellite cloud retrievals using ground-based results
- Improving GCM/WRF and reanalyses simulated cloud, radiation and precipitation using surface-satellite data
- Investigating the feedback processes of cloud and radiation on Arctic sea ice.

### **4. Instructional Activities**

#### **Courses Taught**

- Physical Climatology, ATMO 421/521, Spring, 2020 at University of Arizona
- Atmospheric Radiation and Remote Sensing, ATMO 656A, Fall 2019, Uni of Arizona
- Physical Meteorology II (ATMO 451B/551B), Spring 2018 and 2019 at University of Arizona
- Introduction to Weather and Climate (ATMO 170A), Fall 2017 at University of Arizona
- An Intro to Atmospheric and hydrology remote sensing (AMTO555/455). Spring 2017 at University of Arizona.
- Statistical Methods in Atmospheric Sciences (AtSc 540) during Spring 2016 at UND.
- Co-taught “Remote Sensing of Atmosphere (AtSc 345)” during fall 2014.
- Radiative transfer modeling (Mote Carlo, Discrete Ordinate Method, Adding-doubling, two stream, Mie Scattering, Line-by-Line, etc) for graduate students at the University of North Dakota (UND) during summer 2010.
- “Radiative transfer & climate modeling (Meteo 6680)” for graduate students at University of Utah during spring 2002.
- “Advanced Earth System Sciences (AtSc 575)” during the falls of 2006, 2008, 2010, 2012, and 2014 at UND
- “Atmospheric Radiation (AtSc525)” during the Falls of 2005, 2007, 2009, 2013 and 2015.
- “Numerical methods in Meteorology (AtSc405)” during the falls of 2002, 2003, and 2004.
- “Computer concepts in Meteorology (AtSc 370)” during spring 2003.

- “Physical Meteorology (AtSc 353) during the springs of 2007, 2008, and 2009.
- “Meteorological Instrumentation (AtSc 240)” during the springs of 2003, 2004, 2005, and 2006.

### **Theses/Dissertation/Graduate Projects Directed**

#### **Current students (6 Ph. D students and 2 MS students)**

Wenjun Cui, Ph.D student (2016-2020), Investigation of precipitation and improvement of reanalyzed cloud-precipitation over continental USA (Supported by DOE CMDV project)  
Ted McHardy, Ph.D student (2016-2020). Investigation of angular dependence of satellite-retrieved cloud properties (Supported by NASA CERES).  
Xiaojian Zheng, MS student (2017-2019), Ph. D student (2019-2014). Investigation of aerosol-cloud interactions over Ocean and Land.  
Xiang Zhong, Ph.D student (2020-2025).  
Xingyu Zhang, Ph.D student (2020-2025)  
Alexa Marcovecchi, MS student (2018-2020) and Ph.D student (2020-2025)  
Jordann Brendecke, MS student (2019-2021)  
Mary F. Gabito, MS student (2020-2022).

#### **Students Supervised and supported**

##### **MS students:**

Yang Liu and Julie Popham, 2005; Rebecca Obrecht and Hongchun Jin, 2008; Tim Logan, Kathryn Crosby, and Susan Wahl, 2009; Di Wu, 2010; Behn Zib, 2011; Katie Giannecchini and Ryan Stanfield, 2012; Shaoyue Qiu, 2013; Erica Dolinar, Jingjing Tian, Adam Schwantes and Ronald Stenz, 2014; Peng Wu, 2015; Wenjun Cui, 2016, Brooke Hagenhoff and Josh Markel, 2017. Casey Erin Oswant, 2018, Xiaojian Zheng, 2019, Alexa Marcovecchi, 2020.

##### **Ph.D students:**

Aaron Kennedy, Ph. D, 2011: An assistant professor at UND since August 2013  
Zhe Feng, Ph. D., 2011: Scientist II at DOE PNNL  
Received the first Peter Hobbs student award during 2010 AMS cloud Physics.  
Received the third best Ph.D dissertation award during 2011-2012 from Chinese-American Oceanic and Atmospheric Association (2013 AMS meeting).  
Tim Logan, Ph.D., 2014: Assistant Professor at Texas A&M University since 2014.  
Received the best student poster award during 2014 AMS meeting.  
Ryan Stanfeld, Ph.D., 2017: As post-Doctor at NASA JPL and Cal-Tech.  
Jingyu Wang, Ph.D., 2018. As post-Doctor at DOE PNNL  
Erica Dolinar, Ph.D., 2018, As post-Doctor at Navy NRL.  
Shaoyue Qiu, Ph.D, 2018, As post-Doctor at DOE BNL.  
Jingjing Tian, Ph. D, 2019, As post-Doctor at DOE LLNL  
Peng Wu, Ph.D. 2020, As post-Doctor at DOE PNNL  
Yiyi Huang, Ph.D. 2020, As post-Doctor at DOE LANL

##### **Research Faculty**

Dr. Baike Xi, Research Professor, BS from Beijing Uni in 1985, Ph.D in Meteo, 1999, Penn State University  
Take an overall responsibility for my group research and supervise graduate students, primarily supported by NASA CERES project since 2002.  
Dr. Hailong Zhang, visiting professor, 2019-2020.  
Dr. Dale Ward, Lecturer, 2019-

### **5. Institutional Service**

- **University:** The UA EDO executive committee (2016-). UA faculty Senate (2019-2021).
- **College:** UA EDO faculty search committee (2016-2017), and advisory committee for COS sabbatical leave and P&T.
- **Department:** P&T and Academic committees (2016- ), director of graduate study (2019-)

#### **6. Professional memberships:**

- Science Team members (PIs): NASA MAP project 2006-2010, NEWS project 2007-2011 (also Co-Chair of extreme working group), CERES project 2003-2021, EPSCoR 2011-2015, Libera 2020-2032, ESS 2014-2021; NOAA GOES-R 2011-2015, MAPP 2013-2016, R2O 2015-2018; and DOE ARM/ASR 1999-2016, CESM 2015-2018, CMDV 2016-2020; EAGLES 2019-2022.
- Member, American Meteorological Society and American Geophysical Union.

#### **7. Publications (researcherID: C-5959-2016, 135 total, citation=3851, H-index 34, Research gate 42.76, total impact 313.76)**

**Published/submitted (\* indicates students/researchers advised and supported by me)**

#### **Year 2020**

- 135) Xi, B., **X. Dong**, X. Zheng, and P. Wu, 2020: The cloud properties over Southern Ocean during MARCUS field campaign. Submitted to JGR.
- 134) Marcovecchio, A., A. Behrangi, **X. Dong**, B. Xi and Y. Huang, 2020: Precipitation Influence on and Response to Early and Late Arctic Sea Ice Melt Onset During Melt Season. Submitted to Clim. Dyn.
- 133) Cui, C., **X. Dong**, B. Wang, and H. Yang, 2020: The Phase Two of the Integrative Monsoon Frontal Rainfall Experiment (IMFRE-II) in the Middle and Lower Reaches of the Yangtze River in 2020. Submitted Adv. In Atmos. Sci. AAS-2020-0262.
- 132) Cui, C., **X. Dong**, B. Wang, B. Xi, Y. Deng, and Y. Ding, 2020: Integrative Monsoon Frontal Rainfall Experiment (IMFRE): A Mid-Term Review. Submitted Adv. In Atmos. Sci.
- 131) Zhang, Z., Q. Song, D. Mechem, V. Larson, J. Wang, Y. Liu, M. Witte, **X. Dong**, and P. Wu, 2020; Vertical Dependence of Horizontal Variation of Cloud Microphysics: Observations from the ACE-ENA field campaign and implications for warm rain simulation in climate models. ACPD, <https://doi.org/10.5194/acp-2020-788>
- 130) McHardy, T.M., J.R. Campbell, ...**X. Dong**, 2020; Detecting Transparent Cirrus Clouds Over Ocean Using the GOES-16 ABI 1.378  $\mu\text{m}$  Channel. Submitted to J. Atmos. and Oceanic Tech.
- 129) Huang, Y., Q. Ding, **X. Dong**, and B. Xi, 2020; The summertime low clouds: bridging large-scale circulation and sea ice variations over the Arctic, Submitted to Communications Earth & Environment.
- 128) Hu. Y., Y. Deng, Y. Lin, Z. Zhou, C. Cui and **X. Dong**, 2020: Dynamics of the Spatiotemporal Morphology of Mei-yu Fronts: An Initial Survey. Submitted Climate Dynamics.
- 127) **Dong, X.**, P. Wu. Y. Wang and B. Xi, 2020: Observational constraints on warm rain processes in climate models using new ground-based retrievals. Submitted to Nature Climate Change.
- 126) **Dong, X.**, 2020: Stratus and Stratocumulus clouds, Chapter 8 of Fast Physics in Large Scale Atmospheric Models: Parameterization, Evaluation, and Observations. AGU, Manuscript ID 2020-Mar-CH-1234, under revision.
- 125) Wu\*, P., **X. Dong** and B. Xi, 2020: A Climatology of Marine Boundary Layer Cloud and Drizzle Properties derived from Ground-based Observations over the Azores. J. Clim. DOI: 10.1175/JCLI-D-20-0272.1.
- 124) Luo, R. Q. Ding, Z. Wu, I. Baxer, M. Bushuk, E. Blanchard-Wrigglesworth, Y. Huang, and **X. Dong**, 2020: Summertime atmosphere-sea ice coupling in the Arctic simulated by CMIP5/6 models: Importance of large-scale circulation and low-level clouds. Accepted by Clim. Dyn.
- 123) Wang, Y., X. Zheng, **X. Dong**, B. Xi, P. Wu, T. Logan and Y.L. Yung, 2020: Long-range Transport of

- Aerosols on Marine Boundary Cloud Properties. Submitted to ACP-AMT ACE-ENA Special Issue.
- 122) Ward\*, D., **X. Dong**, B. Xi, P. Wu, X. Zheng and Yuan Wang, 2020: Organized Variations in MBL Cloud Microphysical Properties Observed by Aircraft and Satellite and Simulated by Model. ACPD, acp-2020-817
  - 121) Huang\*, Y., **X. Dong**, J. Kay, B. Xi, and E.A. McIlhattan, 2020: The Climate response to increased Cloud Liquid Water in CESM1: A sensitivity study of Wegener-Bergeron-Findeisen Process. Climate Dynamics, under revision.
  - 120) Logan, T., **X. Dong**, B. Xi, X. Zheng, Y. Wang, P. Wu, E. Marlow and J. Maddux, 2020: Quantifying the seasonal climatological trends and impacts of aerosols in North America using a novel aerosol component classification index. Earth and Space Science, under revision.
  - 119) Yang, H., Y. Deng, **X. Dong**, X. Wang, C. Cui and B. Xi, 2020: Dynamic Trigger and Moisture Source of Mei-yu Front Rainstorms: What is the Role of Eastward-Propagating Cloud Clusters from the Tibetan Plateau. Submitted to JGR IMFRE Special issue.
  - 118) Yang, J., Li, J., Li, P., Sun, G., Cai, Z., **Dong, X.**, et al. (2020). Spatial distribution and impacts of aerosols on clouds under Meiyu frontal weather background over central China based on aircraft observations. Journal of Geophysical Research: Atmospheres, 125, e2019JD031915. <https://doi.org/10.1029/2019JD031915>
  - 117) Liu, L., C. Cui, Y. Deng, Z. Zhou, J. Ren, Z. Cai, Y. Bai, B. Wang and **X. Dong**, 2020: Localization and Intensification of Mei-Yu Rainfall due to Aerosol-Cloud Interactions: A Preliminary Assessment Based upon WRF Simulations and IMFRE 2018 Field Observations. JGR, 125, e2019JD031952. <https://doi.org/10.1029/2019JD031952>
  - 116) Li, C., Deng, Y., Cui, C., Wang, **X., Dong, X.**, & Jiang, X. (2020). Hydrometeor budget of the Meiyu frontal rainstorms associated with two different atmospheric circulation patterns. Journal of Geophysical Research: Atmospheres, 125, e2019JD031955. <https://doi.org/10.1029/2019JD031955>
  - 115) \*Fu, Z., **X. Dong**, L. Zhou, J. Wang, W. Cui, R. Wan, L. Leng and B. Xi, 2020: Statistical Characteristics of the Raindrop Size Distributions in Central China During Meiyu Season. JGR, DOI: 10.1029/2019JD031954
  - 114) \*Zhou, L., **X. Dong**, Z. Fu, B. Wang, L. Leng, B. Xi, and C. Cui, 2020: Vertical Distributions of Raindrops and Z-R Relationships Using Micro Rain Radar and 2D-Video Distrometer Measurements during the Integrative Monsoon Frontal Rainfall Experiment (IMFRE). JGR, 125, e2019JD031108. <https://doi.org/10.1029/2019JD031108>.
  - 113) Hao He, Hailong Wang, Zhaoyong Guan, Haishan Chen, Qiang Fu, Muyin Wang, **Xiquan Dong**, Chunguang Cui, Likun Wang, Bin Wang, Gang Chen, Zhanqing Li, and Da-lin Zhang, 2020: Facilitating International Collaboration on Climate Change Research. BAMS, DOI 10.1175/BAMS-D-19-0320.1.
  - 112) \*Sun, Y., **X. Dong**, W. Cui, Z. Zhou, Z. Fu, L. Zhou, Y. Deng, C. Cui, 2020: Vertical Structures of Typical Meiyu Precipitation Characteristics Retrieved from GPM-DPR. JGR, 125, 2019JD031466. <https://doi.org/10.1029/2019JD031466>.
  - 111) Tian\*, J., **X. Dong**, B. Xi and Z. Feng, 2020: Characteristics of Ice Cloud-Precipitation of Warm Season Mesoscale Convective Systems over the Great Plains. J. Hydrometeo, DOI: 10.1175/JHM-D-19-0123.1.
  - 110) \*Zheng, X., B. Xi, **X. Dong**, T. Logan, Y. Wang and Peng Wu, 2020: Investigation of aerosol and cloud interactions under different absorptive aerosol regimes using ARM SGP ground-based measurements. Atmos. Chem. Phys., 20, 3483–3501. <https://doi.org/10.5194/acp-20-3483-2020>
  - 109) \*Cui, W., **Dong, X.**, Xi, B., & Liu, M. (2020). Cloud and precipitation properties of MCSs along the Meiyu frontal zone in central and southern China and their associated large - scale environments. JGR-Atmosphere, 125, e2019JD031601. <https://doi.org/10.1029/2019JD031601>,
  - 108) \*Cui, W., **X. Dong**, B. Xi, Z. Feng, and J. Fan, 2020: Can the GPM IMERG product accurately represent MCSs' precipitation characteristics over the Central and Eastern United States? J. Hydrometeo., 21, 39-57, DOI: 10.1175/JHM-D-19-0123.1
  - 107) Li, Z., Y. Wang, J. Guo, M. Cribb, **X. Dong** et al., 2020: East Asian Study of Tropospheric Aerosols

and Impact on Regional Cloud, Precipitation, and Climate (EAST-AIRCPC). *JGR*, 124, 2019JD030758.

- 106) Wu\*, P, **X. Dong**, B. Xi, and D.M. Ward, 2020: Profiles of MBL cloud and drizzle microphysical properties retrieved from ground-based observations and validated by aircraft in-situ measurements over the Azores. *JGR*, 125, e2019JD032205. <https://doi.org/10.1029/2019JD032205>.

### **Year 2019**

- 105) Hu, Y., Y. Deng, Z. Zhou, H. Li, C. Cui, and **X. Dong**, 2019: A Synoptic-View-Based Assessment of the Summer Extreme Rainfall over the Middle Reaches of Yangtze River in CMIP5 Models. *Clim. Dyn.*, <https://doi.org/10.1007/s00382-019-04803-3>.
- 104) \*Huang, Y., **Dong, X.**, Bailey, D. A., Holland, M. M., Xi, B., DuVivier, A. K., et al (2019). Thicker clouds and accelerated Arctic Sea ice decline: The atmosphere-sea ice interactions in spring. *Geophysical Research Letters*, 46. <https://doi.org/10.1029/2019GL082791>
- 103) \*Wang, X., **X. Dong**, Y. Deng, C. Cui, R. Wan and W. Cui, 2019: Contrasting Pre-Meiyu and Meiyu Extreme Precipitation in the Yangtze River Valley: Influencing Systems and Precipitation Mechanisms. *J. Hydrometeo.* 1961-1980, 20, DOI: 10.1175/JHM-D-18-0240.1
- 102) \*Cui, W., **X. Dong**, B. Xi, J. Fan, J. Tian, J. Wang, and T. McHardy, 2019: Understanding ice cloud-precipitation properties of three modes of MCSs during PECAN. *JGR-Atmosphere*, 124, 10.1029/2019JD030330
- 101) \*Wang, J., **X. Dong**, A. Kennedy, B. Haggenhoff and B. Xi, 2019: A Regime Based Evaluation of Southern and Northern Great Plains Warm Season Precipitation Events in WRF. *Wea. Forecasting*, 34, 805-834, DOI: 10.1175/WAF-D-19-0025.1.
- 100) \*Tian, J., **X. Dong**, B. Xi, C.R. Williams, and P. Wu, 2019: Estimation of Liquid Water Path in Stratiform Precipitation Systems using Radar Measurements. *Atmos. Meas. Tech.* 12, 3743–3759, <https://doi.org/10.5194/amt-2018-388>.
- 99) \*Dolinar E.K., **X. Dong**, B. Xi, J.H. Jiang, N.G. Loeb, and J.R. Campbell. 2019: A Record of Global Single-layered Ice Cloud Properties and Associated Radiative Heating Rate Profiles from an A-Train Perspective. *Clim. Dyn.* DOI: 10.1007/s00382-019-04682-8
- 98) Han, B. et al. 2019: Cloud-Resolving Model Intercomparison of an MC3E Squall Line Case: Part II – Stratiform Precipitation Properties. *JGR*. 124. <https://doi.org/10.1029/2018JD029596>
- 97) Zhang, Z, H. Song, P.L. Ma, V. E. Larson, M. Wang, and **X. Dong**, 2019: Subgrid Variations of the Cloud Water and Droplet Number Concentration Over Tropical Ocean: Satellite Observations and Implications for Warm Rain Simulation in Climate Models. *Atmos. Chem. Phys.*, 19, 1–19, 2019 <https://www.atmos-chem-phys.net/19/1077/2019/>.

### **Year 2018**

- 96) Chen, X., X. Huang, **X. Dong**, B. Xi, E.K. Dolinar, N.G. Loeb, S. Kato, P. Stackhouse, and M.G. Bosilovich, 2018: Using AIRS and ARM SGP clear-sky observations to evaluate meteorological reanalyses: a hyperspectral radiance closure approach. *JGR*, 123. <https://doi.org/10.1029/2018JD028850>
- 95) \*Wang, J., **X. Dong**, and B. Xi, 2018: Investigation of liquid cloud microphysical properties of deep convective systems: 2. Parameterization of rain drop size distribution and its application for convective rain estimation. *JGR*, 123, <https://doi.org/10.1029/2018JD028727>.
- 94) \*Wu, P., B. Xi, **X. Dong**, and Z. Zhang, 2018: Evaluation of autoconversion and accretion enhancement factors in GCM warm-rain parameterizations using ground-based measurements over the Azores. *Atmos. Chem. Phys.*, 18, 1–16, 2018. <https://doi.org/10.5194/acp-18-1-2018>
- 93) Hu, Y., Y. Deng, Z. Zhou, C. Cui, and **X. Dong**, 2018: A Statistical and Dynamical Characterization of Large-Scale Circulation Patterns Associated with Summer Extreme Precipitation over the Middle Reaches of Yangtze River. *Clim Dyn.* <https://doi.org/10.1007/s00382-018-4501-z>
- 92) \*Qiu S., B. Xi and **X. Dong**, 2018: Influence of wind directions on thermodynamic properties and Arctic mixed-phase clouds at Barrow, Alaska in autumn season. *JGR*, 123,

- <https://doi.org/10.1029/2018JD028631>
- 91) \*McHardy T.M., **X. Dong**, B. Xi, M. M. Thieman, and P. Minnis, 2018: Comparison of Daytime low-level Cloud Properties derived from GOES and ARM SGP Measurements. *JGR*, 123, <https://doi.org/10.1029/2018JD028911>.
- 90) \*Huang, Y., **X. Dong**, B. Xi and Y. Deng, 2018: A Survey of the Atmospheric Physical and Dynamical Processes Key to the Onset of Arctic Sea Ice Melting in Spring. *Clim Dyn.* <https://doi.org/10.1007/s00382-018-4422-x>
- 89) Pu, Z., C. Lin, **X. Dong**, and S. Krueger, 2018: Sensitivity of numerical simulations of a mesoscale convective system to ice hydrometeors in bulk microphysical parameterization: Pure and Applied Geophysics. DOI 10.1007/s00024-018-1787-z
- 88) Fan, T., C. Zhao, and X. Dong, 2018: Quantify contribution of aerosol errors to cloud fraction biases in CMIP5 Atmospheric Model Intercomparison Project simulations. 1-17, *International Journal of Climatology*. DOI:10.1002/joc.5490
- 87) \*Tian, J., **X. Dong**, B. Xi, P. Minnis, S. Sun-Mack and W. L. Smith, Jr., 2018: Comparisons of Water Path in Deep Convective Systems among CERES-MODIS, GOES, and Ground-based retrievals. *JGR*, 123. <https://doi.org/10.1002/2017JD027498>.
- 86) Clark, A., X. Dong et al., 2018: The Community Leveraged Unified Ensemble (CLUE) in the 2016 NOAA/Hazardous Weather Testbed Spring Forecasting Experiment. *BAMS*, 1433-1448, <https://doi.org/10.1175/BAMS-D-16-0309.1>.
- 85) Dong, X., 2018: Preface to the special issue on the “Aerosols, Clouds, Radiation, Precipitation, and Their Interactions”. *Adv. Atmos. Sci.*, **35**(2), doi: <https://doi.org/10.1007/s00376-017-7007-4>
- 84) Wang, Y. et al. 2018: Aerosol microphysical and radiative effects on continental cloud ensembles. *Adv. Atmos. Sci.*, **35**(2), <https://doi.org/10.1007/s00376-017-7091-5>.
- 83) \*Logan, T., X. Dong, B. Xi, 2018: Aerosol properties and their impacts on surface CCN at the ARM Southern Great Plains site during the 2011 Midlatitude Continental Convective Clouds Experiment. *Adv. Atmos. Sci.*, **35**(2), 224-233. doi: <https://doi.org/10.1007/s00376-017-7007-4>

### **Year 2017**

- 82) \*Cui, W., X. Dong, B. Xi, and A. Kennedy, 2017: Evaluation of reanalyzed precipitation variability and trends using the GPCP product over the CONUS. 2227-2248, 118, *J. Hydrometeo*. DOI: 10.1175/JHM-D-17-0029.1
- 81) \*Wu, P., **X. Dong**, B. Xi, Y. Liu, M. Khaiyer, and P. Minnis, 2017: Effects of Environment Forcing on Marine Boundary Layer Cloud-Drizzle Processes. *JGR-atmosphere*, 122, 4463-4478, doi:10.1002/2016JD026326
- 80) Fan, J., et al., 2017: Cloud-Resolving Model Intercomparison of a MC3E Squall Line Case – Properties of Convective Cores. *JGR*. DOI: 10.1002/2017JD026622
- 79) Fridlind, A.M., et al., 2017: Derivation of aerosol profiles for MC3E convection studies and use in simulations of the 20 May squall line case. *Atmos. Chem. Phys.*, 17, 5947–5972, 2017 [www.atmos-chem-phys.net/17/5947/2017/doi:10.5194/acp-17-5947-2017](http://www.atmos-chem-phys.net/17/5947/2017/doi:10.5194/acp-17-5947-2017)
- 78) Li, J., W.C. Wang, **X. Dong** and J. Mao, 2017: Seasonal Characteristics of Cloud Radiative Effects and their associations with cloud fraction and precipitation over Asian Monsoon Regions. *Climate Dynamics*, DOI :10.1007/s00382-016-3509-5.
- 77) \*Huang Y, **X. Dong**, B. Xi, E.K. Dolinar, R.E. Stanfield and S. Qiu, 2017: Quantifying the uncertainties of reanalyzed Arctic cloud and radiation properties using satellite-surface observations: *J Clim.*, 8007-8029, 30, 10.1175/JCLI-D-16-0722.1
- 76) \*Huang, Y., **X. Dong**, B. Xi, E. Dolinar, R. Stanfield, 2017: The footprints of 16-year trends of Arctic springtime cloud and radiation properties on September sea-ice retreat. *JGR*. 122, 2179-2193. DOI: 10.1002/2016JD026020
- 75) Zhang, Z., **X. Dong**, B. Xi, H. Song, P-L. Ma, S. Ghan, S. Platnick, and P. Minnis, 2017: Inter-comparisons of marine boundary layer cloud properties from two MODIS products and ground-based retrievals over the ARM Azores site. *JGR*. 122, DOI:10.1002/2016JD025763.

- 74) \*Zhang, L., **X. Dong**, B. Xi, A. Kennedy, and Z. Li, 2017: Evaluation of NASA GISS Post-CMIP5 Single Column Model Simulated Cloud and Precipitation Using the ARM SGP Observations. *Adv. Atmos. Sci.*, **34**(3), 306-320, doi: 10.1007/s00376-016-5254-4.

### **Year 2016**

- 73) \*Dolinar, E., **X. Dong**, B. Xi, J. Jiang, N.G. Loeb, 2016: A Clear-sky Radiation Closure Study Using a One-dimensional Radiative Transfer Model and Collocated Satellite-Surface-Reanalysis Data Sets. *JGR*, **121**, 13,698-13,714. doi:10.1002/2016JD025823.
- 72) **Dong, X.**, B. Xi, S. Qiu, P. Minnis, S. Sun-Mack, and F. Rose, 2016: A Radiation Closure Study of Arctic Cloud Microphysical Properties using the collocated satellite-surface data and Fu-Liou Radiative Transfer Model. *J. Geophys. Res. Atmos.*, **121**, 10,175-10,198, doi:10.1002/2016JD025255.
- 71) Compo, G., J. Carton, X. Dong, A. Kumar, S. Saha, J. S. Woollen, L. Yu, and H. M. Archambault, 2016: Report from the NOAA Climate Reanalysis Task Force Technical Workshop. NOAA Technical Report OAR CPO-4, Silver Spring, MD. doi: 10.7289/V53J39ZZ. Available at <http://cpo.noaa.gov/sites/cpo/MAPP/pdf/ClimateReanalysisTaskForceWorkshopReport.pdf>.
- 70) \*Dolinar, E., **X. Dong**, and B. Xi, 2016: Evaluation and intercomparison of clouds, precipitation and radiation budgets in recent reanalyses using satellite-surface data. *Clim Dyn.* **46**, 2123-2144. DOI :10.1007/s00382-015-693-z.
- 69) \*Stenz, R., **X. Dong**, B. Xi, Z. Feng, and R.J. Kuligowski, 2016: Improving Satellite Quantitative Precipitation Estimates With Optical Depth Retrievals. *J. Hydrometeorology*, **17**, 557-570. DOI: 10.1175/JHM-D-15-0057.1
- 68) \*Cui, W., **X. Dong**, B. Xi, and R. Stenz, 2016: Comparison of the GPCP 1DD precipitation product and NEXRAD Q2 precipitation estimates over the CONUS. *J. Hydrometeorology*, **17**, 1837-1853. DOI:10.1175/JHM-D-15-0235.1
- 67) Carletta, N.D., G.L. Mullendore, M. Starzec, B. Xi, Z. Feng, and **X. Dong**, 2016: Determining Best Method for Estimating Observed Level of Maximum Convective Detrainment based on Radar Reflectivity. *Monthly Weather Review*, **144**, 2915-2926, DOI: 10.1175/MWR-D-15-0427.1
- 66) \*Wang, J., **X. Dong**, B. Xi and A.J. Heymsfield, 2016: Investigation of liquid cloud microphysical properties of deep convective systems: 1. Parameterization of rain drop size distribution and its application for stratiform rain estimate. *J. Geophys. Res. Atmos.*, **121**, 10,739-10,760, doi:10.1002/2016JD024941.
- 65) \*Tian, J., **X. Dong**, B. Xi, J. Wang, C.R. Homeyer, G.M. McFarquhar, and J. Fan, 2016: Retrievals of ice cloud microphysical properties of deep convective systems using radar measurements. *J. Geophys. Res. Atmos.* **121**, 10,820-10,839, doi:10.1002/2015JD024686.
- 64) \*Stanfield, R., J. Jiang, **X. Dong**, B. Xi, H. Su et al, 2016: A Quantitative Assessment of Precipitation Associated With the ITCZ in the CMIP5 GCM Simulations. *Clim Dyn.* **47**, 1863-1880. DOI: 10.1007/s00382-015-2937-y.
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### **Year 2015**

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#### **Selected invited seminars and presentations within five years**

The annual presentations from my group, on average, are approximately 40-50.

- 1) Invited talk at GEWEX workshop, University of Arizona, January 23, 2020.
- 2) Invited seminar at NASA GSFC, September 13, 2019
- 3) Invited talk at NASA ELS-XVIII meeting, Hangzhou, June 4, 2019
- 4) Invited talk at Academia Sinica, Taipei, Taiwan, Dec. 6, 2018
- 5) Invited talk at National Taiwan University, Taipei, Taiwan, Dec. 6, 2018.
- 6) Invited talk at 2018 AMS annual meeting, Austin, Jan. 8-12, 2018
- 7) Invited talk at 2017 AGU annual meeting, New Orleans, Dec. 11-15, 2017
- 8) Invited talk by NASA JPL and Cal-Tech, Nov. 3, 2017
- 9) Invited two talks at 2016 AOGS, Beijing, July 31-Aug. 5, 2016.
- 10) Invited keynote speakers at 7<sup>th</sup> COAA meeting, Beijing, July 27-30, 2016.
- 11) Invited Seminar at University of Arizona, Tucson, AZ, January 28, 2016.
- 12) Invited Seminar at Uni. Of Washington, Seattle, Nov. 19, 2015.
- 13) Invited seminar, University of Alabama at Huntsville, April 8, 2015.
- 14) Invited talk, 2015 AMS, Phoenix, AZ, Jan. 4-7, 2015.

#### **8. Honors/Awards**

2014: NASA Group Achievement Award for NASA CERES Cloud Group “*For sustained excellence and innovation in developing and validating the Cloud Retrieval Systems for CERES Editions 2 and 4 Climate Data Records*”

1998/2003/2008: NASA group achievement award for the CERES algorithm develop/data manage team.

2009: The Pecora award for NASA CERES team

2003 and 2014: Departmental excellent in research, University of North Dakota

2008 and 2015: Golden Remer Award (for excellent teaching), Dept. of Atmospheric Sciences, UND