

# CURRICULUM VITAE

## ANITA D. RAPP

### AFFILIATION & ADDRESS

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Department of Atmospheric Sciences  
Texas A&M University  
3150 TAMU  
College Station, TX 77843-3150  
(979) 862-1580  
E-mail: arapp@tamu.edu  
Website: people.tamu.edu/arapp

### EDUCATION

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**Ph.D. Atmospheric Science**; Colorado State University, Fort Collins, Colorado, 2008  
Dissertation: “On the Role of Warm Rain Clouds in the Tropics”  
Advisor: Prof. Christian Kummerow

**M.S. Atmospheric Science**; Colorado State University, Fort Collins, Colorado, 2004  
Thesis: “Evaluation of the Adaptive Infrared Iris Using TRMM Satellite Measurements”  
Advisor: Prof. Christian Kummerow

**B.S., Magna Cum Laude, Meteorology**; Texas A&M University, College Station, Texas, 2000  
Thesis: “On the Relationship Between Brightness Temperature and Thunderstorm Evolution”  
Advisor: Prof. Michael Biggerstaff

### RESEARCH INTERESTS

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Clouds and Precipitation	Satellite Meteorology	Radar & Remote Sensing
Global Hydrologic Cycle	Atmospheric Radiation	Climate Change

### PROFESSIONAL EXPERIENCE

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Associate Professor, *Department of Atmospheric Sciences*, Texas A&M University, 2019–present

Assistant Professor, *Department of Atmospheric Sciences*, Texas A&M University, 2014–present

Research Assistant Professor, *Department of Atmospheric Sciences*, Texas A&M University, 2012–2014

Assistant Research Scientist, *Department of Atmospheric Sciences*, Texas A&M University, 2010–2012

Visiting Postdoctoral Fellow, *Cooperative Institute for Research in Environmental Sciences*, University of Colorado, 2008–2009

Graduate Research Assistant, *Department of Atmospheric Science*, Colorado State University, 2002–2008

Teaching Assistant, *Department of Atmospheric Science*, Colorado State University, 2005  
Research Scientist, *Analytical Services & Materials, Inc.*, Hampton, Virginia, 2000–2002  
Intern, *Science Applications International Corporation*, Hampton, Virginia, 2000  
Student Technician, Mesoscale Research Group, *Department of Atmospheric Sciences*, Texas  
A&M University, 1998–2000

## GRANTS & CONTRACTS

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### *Current projects*

- Loisel, J. (PI), A.G. Klein, Z. Wang, M.P. Bishop, D.M. Cairns, A.M. Filippi, C.L. Morgan, O. Frauenfeld, **A.D. Rapp** (Member), Z. Medina-Cetina: Monitoring Rapidly Changing Arctic Ecosystems Using High-Resolution Satellite-Based Datasets and Artificial Intelligence. *TAMU X-Grants*; 07/2018–07/2020; \$500,000 (~\$5400 to Rapp).
- Bowman, K. (PI), J. Anderson, E. Atlas, K. Bedka, P. Bui, D. Cziczo, B. Daube, J. Dykema, J. Elkins, T. Hanisco, E. Hintsa, C. Homeyer, L. Lait, C. Liu, F. Moore, P. Newman, and **A. D. Rapp** (Co-I), D. Sayres, J. Smith, J. St. Clair, R. Ueyama, D. Wilmouth, F. Keutsch, R. Hannun, A. Swanson: Dynamics and Chemistry of the Summer Stratosphere; *NASA NNH17ZDA001N-EVS3 Earth Venture Suborbital-3*; 01/01/2019–12/31/2023; \$15,488,251 (\$2.15M to TAMU shared between Bowman and Rapp)
- Rapp, A. D.** (PI); Towards understanding variability in precipitation-anvil area relationships; *NASA Precipitation Measurement Missions (PMM) Science Team*; 01/01/2019–12/31/2021; \$303,313.

### *Selected projects*

- L'Ecuyer, T. (PI), **Rapp, A. D.** (Co-I), M. Rodell, S. Kato, W. Olson, M. Grecu, F. Robertson, J. Roberts, R. Adler, M. Bosilovich, G. Gu, and H. Beaudoin: *NASA ROSES-2018 NEWS*; TBD but expected 06/01/2020–05/31/2023; \$2.4M (~\$267K to Rapp)

### *Completed projects*

- Rapp, A.D.** (PI): Detection of Precipitation Onset with Implications for Passive Microwave Rainfall Retrievals; *NASA New Investigator Program*; 08/01/2014–12/31/2019; \$264,156 (+\$85,892 cost-shared by TAMU).
- L'Ecuyer, T., and **A.D. Rapp** (Co-I): Multi-parameter Diagnostics of Cloud Influences on the Atmospheric Energy and Water Cycle; *NASA NEWS*; 01/01/2015–12/31/2018; \$395,526 (TAMU subcontract \$122,514).
- Rapp, A. D.** (PI, transferred from S. Nasiri): Collaborative Research: Understanding Relationships between Dual-Polarimetric In-Cloud Microphysics and Satellite-Observed Cumulus Cloud Properties to Predict Lightning Character; *NSF Physical and Dynamic Meteorology*; 08/15/2013–07/31/2018 (transferred 8/26/2015); \$231,698.
- Rapp, A. D.** (PI): Local and Remote Effects of Subtropical Cumulus Convection; *NASA NNX13AC14G*; 3/15/2013–02/10/2018; \$296,035.
- Rapp, A. D.** (PI): Quantifying the Water and Energy Budgets of Marine Subsidence Regions; *NASA NNX13AC14G*; 12/01/2012–11/30/2015; \$137,107.
- Rapp, A. D.** (PI): Evaluation of Climate Models in the Southeast Pacific Marine Stratocumulus Region; *NSF AGS-1128024*; 05/01/2011–04/30/2012; \$29,996.

**Rapp, A. D.** (PI): Investigation of Precipitating Marine Stratocumulus Clouds in the Southeastern Pacific using CloudSat; *NASA NNX10AM21G*; 07/01/2010–06/30/2014; \$168,561.

Johnson, Marston (PI), D. Chen (Co-I), S. Cooper (Co-I), T. L'Ecuyer (Collaborator), **A. D. Rapp** (Collaborator): Assessing Cloud and Precipitation Distributions and their Radiative Impacts in EC-Earth, OpenIFS, and CAM6; *Swedish National Space Board*; 2016–2018.

Conlee, D. (PI), S. Nasiri (Co-I), **A. D. Rapp** (Co-I): Student Operational ADRAD Project, TAMU College of Geosciences High Impact Learning Proposal, Summer 2012–Summer 2014; \$60,000.

### ***Pending projects***

**Rapp, A. D.** (PI), S. Brooks (Co-I), C. Nowotarski (Co-I): Targeted Mobile Measurements to Isolate the Impacts of Aerosols and Meteorology on Deep Convection; *DOE Atmospheric Systems Research*; 08/01/2020 – 07/31/2023; \$841,243.

### **AWARDS**

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Texas A&M Center for Teaching Excellence Montague Scholar, 2017–2018

Association of Former Students at Texas A&M Distinguished Achievement Teaching Award  
College Level, 2016

Outstanding Faculty Research Award, Department of Atmospheric Sciences, Texas A&M  
University, 2014

Outstanding Poster Presentation, *World Climate Research Programme Open Science  
Conference*, October 2011

Visiting Postdoctoral Fellowship, *Cooperative Institute for Research in Environmental Sciences*,  
University of Colorado, 2008–2009

*NASA* Earth System Science Fellowship, 2005–2008

Superior Accomplishment Award, *NASA* Contractors Steering Council, 2002

Superior Accomplishment Award, *NASA* Contractors Steering Council, 2001

University Undergraduate Research Fellow, *Texas A&M University* Honors Program, 2000

### **PEER-REVIEWED PUBLICATIONS** (\*/# INDICATES GRADUATE/UNDERGRADUATE STUDENT)

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25. \*Wodzicki, K. R., and **A. D. Rapp**: Changes in precipitating convective feature populations with varying ITCZ width. *J. Climate*, **33**, 4391-4401, doi:10.1175/JCLI-D-19-0689.1.

24. \*Smalley, K., and **A. D. Rapp**, 2020: The role of cloud size and environmental moisture in precipitation in shallow cumulus. *J. Appl. Meteor. and Clim.*, **59**, 535-550, doi:10.1175/JAMC-D-19-0145.1.

23. \*Ren, T., **A. D. Rapp**, J. Mecikalski, and J. Apke, 2019: Lightning and associated convection features in the presence of absorbing aerosols over northern Alabama. *J. Geophys. Res. Atmos.*, **124**, 13375-13396, doi: 10.1029/2019JD031544.

22. #Bartos, E. A., **A. D. Rapp**, and \*K. R. Wodzicki, 2018: Increasing frequency of midtropospheric dry layers in the Pacific Intertropical Convergence Zone. *Geophys. Res. Lett.*, **45**, 13523-13529.

21. Daloz, A. S., E. Nelson, T. L'Ecuyer, **A. D. Rapp**, \*L. Sun, 2018: Assessing the coupled influences of clouds on the atmospheric energy and water cycles in reanalyses with A-Train Observations. *J. Climate*, **31**, 8241-8264.
20. Byrne, M. P., A. G. Pendergrass, **A. D. Rapp**, and \*K. Wodzicki, 2018: Response of the Intertropical Convergence Zone to climate change: Location, width, and strength. *Current Climate Change Reports*, **4**, 355-370.
19. \*Ren, T., **A. D. Rapp**, S. Nasiri, J. Mecikalski, and J. Apke, 2018: Is awareness of the aerosol state useful in predicting enhanced lightning for lightning-producing storms over northern Alabama? *J. Appl. Meteor. Clim.*, **57**, 1663-1681.
18. Stephens, G., M. Hakuba, M. Webb, M. Lebsock, Q. Yue, B. Kahn, S. Hristova-Velleva, **A. D. Rapp**, C. Stubenrauch, G. Elsaesser, and J. Slingo, 2018: Regional intensification of the tropical hydrological cycle during ENSO. *Geophys. Res. Lett.*, **45**, doi:10.1029/2018GL077598.
17. Yi, B., **A. D. Rapp**, P. Yang, B. Baum, and M.D. King, 2017: A comparison of Aqua MODIS ice and liquid water cloud physical and optical properties between Collection 6 and Collection 5.1: Pixel-to-pixel comparisons. *J. Geophys. Res. Atmos.*, **122**, 4528-4549, doi:10.1002/2016JD025586.
16. Yi, B., **A. D. Rapp**, P. Yang, B. Baum, and M.D. King, 2017: A comparison of Aqua MODIS ice and liquid water cloud physical and optical properties between Collection 6 and Collection 5.1: Cloud radiative effects. *J. Geophys. Res. Atmos.*, **122**, 4550-4564, doi:10.1002/2016JD025654.
15. **Rapp, A. D.**, 2016: Observational evidence linking precipitation and mesoscale cloud fraction in the southeast Pacific. *Geophys. Res. Lett.*, **43**, 7267-7273, doi:10.1002/2016GL069906.
14. \*Wodzicki, K., and **A. D. Rapp**, 2016: Long-term characterization of the Pacific ITCZ using TRMM, GPCP, and ERA-Interim. *J. Geophys. Res. Atmos.*, **121**, 3153-3170, doi:10.1002/2015JD024458.
13. \*Ford, T. W., S. M. Quiring, O. W. Frauenfeld, **A. D. Rapp**, 2015: Synoptic conditions related to soil moisture-atmosphere interactions and unorganized convection in Oklahoma. *J. Geophys. Res. Atmos.*, **120**, 11519-11535, doi:10.1002/2015JD023975.
12. \*Ford, T. W., **A. D. Rapp**, S. M. Quiring, and J. Blake, 2015: Soil moisture-precipitation coupling: Observations from the Oklahoma Mesonet and underlying physical mechanisms. *Hydrol. Earth Syst. Sci.*, **19**, 3617-3631, doi:10.5194/hess-19-3617-2015.
11. **Rapp, A. D.**, 2015: Cloud responses of the AMIP simulations of CMIP5 models in the southeastern Pacific marine subsidence region. *Int. J. Climatol.*, **35**, 2908-2921, doi: 10.1002/joc.4181.
10. \*Ford, T.W., **A. D. Rapp**, and S. M. Quiring, 2014: Does convection occur preferentially over dry or wet soils in Oklahoma? *J. Hydrometeorol.*, **16**, 874-888, doi:10.1175/JHM-D-14-0005.1.
9. **Rapp, A. D.**, A. Peterson, O. W. Frauenfeld, S. M. Quiring, and E. B. Roark, 2014: Climatology of precipitation and storm characteristics in Costa Rica using the TRMM Precipitation Radar. *J. Hydrometeorol.*, **15**, 2615-2633, doi:10.1175/JHM-D-13-0174.1.

8. \*Teale, N., #H. Mahan, #S. Bleakney, #A. Berger, #N. Shibley, O. W. Frauenfeld, S. M. Quiring, **A. D. Rapp**, E. B. Roark, and R. Washington-Allen: Impacts of vegetation and precipitation on throughfall heterogeneity in a tropical pre-montane transitional cloud forest. *Biotropica*, **46**, 667–676, doi:10.1111/btp.12166.
7. \*DePasquale, A., C. Schumacher, and **A. D. Rapp**, 2014: Radar observations of MJO and Kelvin wave interactions during DYNAMO/CINDY2011/AMIE. *J. Geophys. Res. Atmos.*, **119**, 6347–6367, doi:10.1002/2013JD021031.
6. **Rapp, A.D.**, M. Lebsock, and T. L’Ecuyer, 2013: Low cloud precipitation climatology in the southeastern Pacific marine stratocumulus region using CloudSat. *Environ. Res. Lett.*, **8**, 014027, doi:10.1088/1748-9326/8/1/014027.
5. **Rapp, A. D.**, C. Kummerow, and L. Fowler, 2011: Interactions between warm rain clouds and atmospheric preconditioning for deep convection in the Tropics. *J. Geophys. Res. Atmos.*, **16**, D23210, doi:10.1029/2011JD016143.
4. **Rapp, A. D.**, M. Lebsock, and C. Kummerow, 2009: On the consequences of resampling microwave radiometer observations for use in retrieval algorithms. *J. Appl. Meteor. Climatol.*, **48**, 1981–1993, doi:10.1175/2009JAMC2155.1.
3. **Rapp, A. D.**, C. Kummerow, and G. Elsaesser, 2009: A combined multi-sensor optimal estimation retrieval algorithm for warm rain clouds. *J. Appl. Meteor. Climatol.*, **48**, 2242–2256, doi:10.1175/2009JAMC2156.1.
2. **Rapp, A. D.**, C. Kummerow, W. Berg, and B. Griffith, 2005: An evaluation of the proposed mechanism of the adaptive infrared iris hypothesis using TRMM VIRS and PR measurements. *J. Climate*, **18**, 4185–4194, doi:10.1175/JCLI3528.1.
1. Dong, X., P. Minnis, G. G. Mace, W. L. Smith, Jr., M. Poellot, R. T. Marchand, and **A. D. Rapp**, 2002: Comparison of stratus cloud properties deduced from surface, GOES, and aircraft data during the March 2000 ARM Cloud IOP. *J. Atmos. Sci.*, **59**, 3265–3284.

#### SUBMITTED/IN REVISION PUBLICATIONS

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1. \*Sun, L., **A. D. Rapp**, T. L’Ecuyer, and A. S. Daloz: Regime dependence of energy and water cycle coupling from satellite observations and reanalysis. Submitted to *J. Geophys. Res. Atmos.*

#### OTHER PUBLICATIONS

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- Rapp, A. D.**, C. Kummerow, W. Berg, B. Griffith, 2002: Shedding light on the adaptive infrared iris hypothesis, *Bull. Amer. Meteorol. Soc.*, **86**, 1727–1728.
- Khaiyer, M. M., J. Huang, P. Minnis, B. Lin, W. L. Smith, Jr., A. Fan, **A. D. Rapp**: Validation of satellite-derived liquid water paths using ARM SGP microwave radiometers, *Proc. 13th ARM Science Team Meeting*, March 31–April 4, 2003.
- Ayers, J. K., P. W. Heck, **A. D. Rapp**, P. Minnis, D. F. Young, W. L. Smith, Jr., L. Nguyen: A one-year climatology of cloud properties derived from GOES-8 over the southeastern Pacific for PACS, *Proc. 11th AMS Conference on Cloud Physics*, June 3–7, 2002.
- Kawamoto, K., P. Minnis, W. L. Smith, Jr., **A. D. Rapp**: Detecting multilayer clouds using satellite solar and IR channels, *Proc. 11th AMS Conference on Atmospheric Radiation*, June 3–7, 2002.

- Rapp, A. D.**, D. R. Doelling, M. M. Khaiyer, P. Minnis, W. L. Smith, Jr., L. Nguyen: Analysis of solar absorption derived from ARM surface and satellite measurements, *Proc. 11th AMS Conference on Atmospheric Radiation*, 43–46, June 3–7, 2002.
- Smith, W. L., Jr., P. Minnis, B. C. Bernstein, **A. D. Rapp**, P. W. Heck: Supercooled liquid water cloud properties derived from GOES: Comparisons with in-situ aircraft measurements, *Proc. 10th AMS Conference on Aviation, Range, and Aerospace Meteorology*, 89–92, May 13–16, 2002.
- Chakrapani, V., D.R. Doelling, **A.D. Rapp**, P. Minnis: Cloud thickness estimation from GOES-8 satellite data over the ARM-SGP site, *Proc. 12th ARM Science Team Meeting*, April 2002.
- Khaiyer, M. M., **A. D. Rapp**, P. Minnis, W. L. Smith, Jr., D. R. Doelling, L. Nguyen, Q. Min: Evaluation of a 5-year cloud and radiative property dataset derived from GOES-8 data over the Southern Great Plains, *Proc. 12th ARM Science Team Meeting*, April 8–12, 2002.
- Minnis, P., W. L. Smith, Jr., **A. D. Rapp**, P. W. Heck, D. F. Young, L. Nguyen, M. M. Khaiyer: Near-real-time retrieval of cloud properties over the ARM CART area from GOES Data, *Proc. 12th ARM Science Team Meeting*, April 8–12, 2002.
- Nguyen, L., P. Minnis, D. F. Young, W. L. Smith, Jr., P. W. Heck, **A. D. Rapp**: Use of multi-resolution imager data to account for partially cloud-filled pixels, *Proc. 12th ARM Science Team Meeting*, April 8–12, 2002.
- Minnis, P., W. L. Smith, Jr., D. F. Young, L. Nguyen, **A. D. Rapp**, P. W. Heck, S. Sun-Mack, Q. Z. Trepte, Y. Chen: A near-real time method for deriving cloud and radiation properties from satellites for weather and climate studies, *Proc. 11th AMS Conference on Satellite Meteorology and Oceanography*, October 15–18, 2001.
- Ayers, J. K., P. W. Heck, **A. D. Rapp**, P. Minnis, W. L. Smith, Jr., C. W. Fairall, and S. Frisch: Validation of cloud properties derived from geostationary satellite data over the southeastern Pacific, *Proc. IAMAS 8th Scientific Assembly*, July 10–18, 2001.
- Khaiyer, M. M., **A. D. Rapp**, D. R. Doelling, M. L. Nordeen, P. Minnis, W. L. Smith, Jr., L. Nguyen: A 3-year climatology of cloud and radiative properties derived from GOES-8 data over the Southern Great Plains, *Proc. 11th ARM Science Team Meeting*, March, 2001.
- Nordeen, M. L., D. R. Doelling, M. M. Khaiyer, **A. D. Rapp**, P. Minnis, L. Nguyen: GMS-5 Satellite-derived cloud properties over the tropical western Pacific, *Proc. 11th ARM Science Team Meeting*, March 19–23, 2001.
- Rapp, A. D.**, D. R. Doelling, M. M. Khaiyer, P. Minnis, W. L. Smith, Jr., L. Nguyen, M. P. Haeffelin, F. P. J. Valero, S. Asano: Comparison of shortwave cloud radiative forcing derived from ARM SGP surface and GOES-8 satellite measurements during ARESE-I and ARESE-II, *Proc. 11th ARM Science Team Meeting*, March 19–23, 2001.

## TEACHING EXPERIENCE

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### *Graduate:*

ATMO655: *Satellite Data in Meteorology*, Department of Atmospheric Sciences, Texas A&M University, Spring 2018

### *Undergraduate:*

ATMO446: *Physical Meteorology*, Department of Atmospheric Sciences, Texas A&M University, Fall 2014, Fall 2015, Fall 2016, Fall 2018

ATMO485: *Directed Studies: Relating Dry Layer Frequency to ITCZ Characteristics*, Department of Atmospheric Sciences, Texas A&M University, Fall 2016, Spring 2017  
ATMO681: *Seminar*, Department of Atmospheric Sciences, Texas A&M University, Spring 2016  
ATMO441: *Satellite Meteorology and Remote Sensing*, Department of Atmospheric Sciences, Texas A&M University, Spring 2015, Spring 2016, Spring 2017, Spring 2019  
ATMO491: *Research: Dry Layers in ERA-Interim*, Department of Atmospheric Sciences, Texas A&M University, Spring 2016  
ATMO443: *Radar Meteorology*, Department of Atmospheric Sciences, Texas A&M University, Fall 2011, Fall 2012  
GEOG324W: *Global Climate Regions (Writing Intensive)*, Department of Geography, Texas A&M University, Fall 2012  
ATMO491: *Summer SOAP*, Department of Atmospheric Sciences, Texas A&M University, Summer 2012, Summer 2013  
AT622: *Atmospheric Radiation*, Teaching Assistant, Department of Atmospheric Science, Colorado State University, Spring 2005

#### **ADVISING & MENTORING**

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##### *Ph.D. Graduate Advising:*

Kyle Wodzicki, Fall 2015–present  
Kevin Smalley, Fall 2016–present  
Tong Ren, Fall 2015–Summer 2018, “Aerosol lightning enhancement over Northern Alabama: Predictions, mechanisms, and simulations”

##### *M.S. Graduate Advising:*

John Cole, Fall 2019–present (co-advised with Bowman)  
Daniel Jellis, Fall 2019–present (co-advised with Bowman)  
Lu Sun, Fall 2015–Spring 2019, “Cloud impact parameters derived from A-Train satellite, ERA-Interim, MERRA-2 and their relationship to the environment”  
Corey Howard, Fall 2015–Summer 2018, “How well do ERA-Interim and MERRA-2 capture ITCZ characteristics and precipitation”  
Robert Marter, Fall 2014–Fall 2017, “Passive microwave precipitation biases: Relationship to cloud properties”  
Kyle Wodzicki, Fall 2013–Fall 2015, “A climatology of Pacific ITCZ characteristics from an automated, objective algorithm”  
Allison Zapalac, Fall 2012–Winter 2014, “Characteristics of a marine stratocumulus to cumulus cloud transition”  
Amanda DePasquale, Fall 2011–Summer 2013 (Co-advisor), “Radar observations of MJO and Kelvin wave interactions during DYNAMO/AMIE/CINDY2012”  
Alisha Brooke Sutphin, Fall 2011–Summer 2013 (Co-advisor), “Characteristics of tropical midlevel clouds using A-Train”

##### *Graduate Committees:*

Jeff Masters (ATMO), 2018–present  
Adam Bell (ATMO), 2018–present

Lidia ChuquiHuaccha (ATMO), 2017–present  
Rhett Douris (GEOG), 2017–present  
Yi Wang (ATMO), 2016–present  
John Cooney (ATMO), 2018–2019  
Jiachen Ding (ATMO), 2015–2019  
Wenlong Gong (STATS), 2016–2019  
Emily Mason (ATMO), 2016–2018  
Claire Schirle (Univ. of Utah), 2016–2018  
Chia-Pang Kuo (ATMO), 2015–2018  
Souichiro Hioki (ATMO), 2014–2018  
Dominic Cartina (ATMO), 2015–2017  
Trent Ford (GEOG), 2013–2015

*Undergraduate Research Mentoring:*

Samantha Nebylitsa, Summer 2018	Alexander Peterson, Summer 2012
Elissa Smith, Spring 2016–2018	Natalie Teale, Summer 2012
Drew Koeritzer, Summer 2016–2018	Nicole Shibley, Summer 2012
Nicholas Slaughter, Summer 2017	Emily Morris, Summer 2012
Claire Schirle, Summer 2015	Sarah Berry, Summer 2011
Hayden Mahan, Summer 2013	Samantha Wills, Summer 2011
Sarah Bleakney, Summer 2013	Arelis Rivera, Summer 2011
Amelie Berger, Summer 2013	

*Postdoctoral Research Advising:*

Kai-Wei Chang, 2020–present (co-mentored with Bowman)

**PROFESSIONAL ACTIVITIES AND MEMBERSHIPS**

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Co-chair of Cloud and Radiation Working Group, NASA Energy and Water Cycle Study (NEWS) Science Team, 2013–2015  
Science team member, NASA NEWS, 2013–present  
Science team member, NASA Precipitation Measurement Missions, 2013–2017, 2019–present  
Science team member, NASA CloudSat/CALIPSO, 2009–2014  
Committee Member, *American Meteorological Society* Committee on Satellite Meteorology and Oceanography, 2006–2009  
Graduate Student Representative, *Department of Atmospheric Science*, Colorado State University, 2005–2006  
Satellite Expert, *The Case of the Phenomenal Weather*, NASA Why? Files Children’s Television Show, 2002  
President, Texas A&M Student Chapter of the American Meteorological Society, 1999–2000  
Secretary, Texas A&M Student Chapter of the American Meteorological Society, 1998–1999

**Editor**

*Journal of Applied Meteorology and Climatology*, 2017–present

**Peer Reviewer**

*Bulletin of the American Meteorological Society*



*Nature Climate Change*  
*Geophysical Research Letters*  
*Climatic Change*  
*Journal of Applied Meteorology and Climatology*  
*Journal of Climate*  
*Journal of Geophysical Research Atmospheres*  
*Journal of Hydrometeorology*  
*International Journal of Climatology*  
*IEEE Transactions on Geoscience and Remote Sensing*  
*Atmospheric Research*  
*NASA*  
*NSF*  
*DOE*

### **Panel Reviewer**

*NASA Earth Venture Instruments 4*  
*DOE ASR Program 2016 Funding Opportunity*  
*DOE ASR New Site Science Opportunities in the ENA and NSA 2014*  
*NASA ROSES 2012 Modeling, Analysis, and Prediction*  
*NASA ROSES 2012 Weather*

### **Session Chair**

2016 17<sup>th</sup> *International Conference on Clouds and Precipitation*  
2016 *GEWEX Earth's Hydrological Sensitivity to Climate Change Workshop*  
2015, 2016 *TEES Smart Grid Center Workshop*  
2014 14<sup>th</sup> *AMS Conference on Cloud Physics and Atmospheric Radiation*  
2014 *Precipitation Measuring Mission Science Team Meeting*

### **Memberships**

*American Meteorological Society, 1998–present*  
*American Geophysical Union, 2000–present*  
*European Geophysical Union, 2006*  
*Sigma Xi Research Honor Society*

### **SERVICE/OUTREACH**

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Texas A&M Dept. of Atmospheric Sciences Faculty Search Chair, Summer 2019–present  
Texas A&M College of Geosciences Climate and Diversity Committee Member, 2019-present  
Texas A&M College of Geosciences IT Committee Member, 2019-present  
Texas A&M College of Geosciences Awards Committee Member, 2019-present  
Texas A&M Dept. of Atmospheric Sciences Graduate Committee Member, 2019-present  
Texas A&M Dept. of Atmospheric Sciences Open Rank Faculty Search Committee Member,  
Summer 2018–Spring 2019  
Texas A&M Dept. of Atmospheric Sciences Department Head Search Committee Member, 2018  
Invited by NASA SMD director to organize and lead NASA Young Leaders Panel at AGU, 2017

Texas A&M Dept. of Atmospheric Sciences Academic Program Review Committee, Fall 2016–present

Texas A&M Dept. of Atmospheric Sciences Faculty Search Committee Member, Fall 2015–Spring 2016

Faculty mentor, *Research Experience for Undergraduates (REU): Atmospheric Science in the Gulf Coast Region at Texas A&M University*, Summers 2015–2018

Texas A&M University Youth Adventure Program, Summer 2014, 2016

Texas A&M Dept. of Atmospheric Sciences Department Head Search Committee Member, 2012

Texas A&M Atmospheric Sciences Department IT committee member, 2012

Faculty mentor, *Research Experience for Undergraduates (REU): Eco-hydrology of a Tropical Montane Cloud Forest*, Summers 2011–2013

NASA Education and Public Outreach presentation at Metairie Academy for Advanced Studies, New Orleans, LA, October 2011

Departmental representative for Texas A&M Atmospheric Science research staff, 2010–2011

K-12 Teacher Workshop Volunteer, *Center for Ocean Sciences Education Excellence (COSEE) West Colorado Collaborative*, 2009

#### INVITED ORAL PRESENTATIONS (\*GRADUATE STUDENT)

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**Rapp, A. D.**, and \*K. Wodzicki, Variability in convective feature populations with ITCZ width in the Pacific, *NASA Precipitating Measuring Missions Science Team Meeting*, Indianapolis, November 2019.

**Rapp, A. D.**, Overview of useful LEO observations for DCOTSS, *NASA DCOTSS Science Team Meeting*, Denver, October 2019.

**Rapp, A. D.**, and \*K. Wodzicki, Observational climatology of Pacific ITCZ characteristics, *GEWEX Earth's Hydrological Sensitivity to Climate Change Workshop*, Exeter, UK, June 20, 2016.

**Rapp, A. D.**, Multiscale impacts of precipitation on marine boundary layer clouds, *Dept. of Atmospheric and Oceanic Sciences Seminar*, University of Wisconsin-Madison, Madison, Wisconsin, April 27, 2015.

**Rapp, A. D.**: Climate, climate monitoring, and climate change, *Yucutan Initiative TAMU-SIIDETEY Climate Change Workshop*, Merida, Mexico, January 26, 2015.

**Rapp, A. D.**, Multiscale feedbacks of precipitation on marine boundary layer clouds, *Dept. of Earth, Ocean, and Atmospheric Sciences Seminar*, Florida State University, Tallahassee, Florida, February 13, 2014.

**Rapp, A. D.**, and \*K. Wodzicki: Relationship between shallow convection and lower tropospheric water vapor, *NASA Precipitating Measuring Missions Science Team Meeting*, Baltimore, Maryland, August 7, 2014.

**Rapp, A. D.**, C. Kummerow, G. Elsaesser, M. Lebsock, and L. Fowler: On the role of warm rain clouds in the tropics, *Invited seminar, Texas A&M University*, College Station, TX, December 7, 2010.

#### CONTRIBUTED ORAL PRESENTATIONS (\*GRADUATE STUDENT)

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- Rapp, A. D.**, \*L. Sun, \*K. Smalley, and T. L'Ecuyer: Environmental modulation of the strength of cloud-radiation-precipitation coupling, *AGU Fall Meeting*, San Francisco, California, December 2019.
- Rapp, A. D.**, \*L. Sun, \*K. Smalley, T. L'Ecuyer, A.S. Daloz: Thermodynamic controls on the scaling between precipitation and cloud radiative impacts, *AMS 15<sup>th</sup> Conference on Atmospheric Radiation and Cloud Physics*, Vancouver, Canada, July 2018.
- Rapp, A. D.**, \*K.R. Wodzicki, and #E.A. Smith: Observed changes in ITCZ extent and the relationship to midtropospheric dry layers, *AMS 98<sup>th</sup> Annual Meeting*, Austin, TX, January 2018.
- \*Wodzicki, K.R., and **A. D. Rapp**: Relating the morphology of convection to ITCZ extent, *AMS 98<sup>th</sup> Annual Meeting*, Austin, TX, January 2018.
- \*Ren, T., **A. D. Rapp**, J.R. Mecikalski, and J. Apke: Lightning and associated convection features in the presence of absorbing aerosols over northern Alabama, *AMS 98<sup>th</sup> Annual Meeting*, Austin, TX, January 2018.
- Rapp, A. D.**, \*L. Sun, \*K. Smalley: Drivers in the scaling between precipitation and cloud radiative impacts in deep convection, *AGU Fall Meeting*, New Orleans, LA, December 2017.
- Rapp, A. D.**, \*L. Sun, T. L'Ecuyer: Cloud and environmental regime dependence of precipitating cloud radiative impact parameters using CloudSat/CALIPSO, *A-Train Symposium*, Pasadena, CA, April 2017.
- Hakuba, M.Z., G.L. Stephens, B. Kahn, Q. Yue, M. Lebsock, Hristova-Velleva, S., **A. D. Rapp**, C. Stubenrauch: Dynamically driven super CC intensification of the tropical hydrological cycle, *EGU General Assembly*, Vienna, Austria, April 2017.
- Rapp, A. D.** and \*K. Wodzicki: Linking observed long-term changes in ITCZ characteristics and the morphology of convective systems, *AGU Fall Meeting*, San Francisco, CA, December 14, 2016.
- Rapp, A. D.**, \*L. Sun, and T. L'Ecuyer: Regime dependence of precipitating cloud radiative efficiencies using CloudSat/CALIPSO, *21<sup>st</sup> AMS Conference on Satellite Meteorology and Oceanography*, Madison, WI, August, 18, 2016.
- \*Wodzicki, K., and **A. D. Rapp**: Observed changes in the morphology of TRMM precipitation features in the ITCZ, *21<sup>st</sup> AMS Conference on Satellite Meteorology and Oceanography*, Madison, WI, August, 15, 2016.
- Rapp, A. D.**, \*L. Sun, and T. L'Ecuyer: Regime dependence of precipitating cloud radiative impact parameters, *17<sup>th</sup> International Conference on Clouds and Precipitation*, Manchester, UK, July, 26, 2016.
- Rapp, A. D.**, and T. L'Ecuyer: Scale-dependence of precipitation impacts on radiative effects in low cloud regimes, *AGU Fall Meeting*, San Francisco, CA, December 18, 2015.
- \*Wodzicki, K., and **A. D. Rapp**: Long-term variability in ITCZ characteristics from an automated objective identification algorithm, *AGU Fall Meeting*, San Francisco, CA, December 15, 2015.
- Rapp, A. D.**, and \*A. Zapalac: The sensitivity of stratocumulus to shallow cumulus transitions to precipitation, *AGU Joint Assembly*, Montreal, Quebec, May 8, 2015.
- Rapp, A. D.**, and \*A. Zapalac: Evidence for the importance of precipitation in closed to open cell transitions, *14<sup>th</sup> AMS Conference on Cloud Physics and Atmospheric Radiation*, Boston, MA, July 10, 2014.

- Rapp, A. D.:** Water and energy budgets of marine subsidence regions, *NASA Energy and Water Cycle Science Team Meeting*, Greenbelt, MD, May 29, 2014.
- Rapp, A. D.,** and \*A. Zapalac: Impacts of precipitation on low clouds using A-Train measurements, *Joint EUMETSAT/AMS Meeting*, Vienna, Austria, September 29, 2013.
- Rapp, A. D.,** M. Lebsock, and T. L'Ecuyer: Quantifying the water and energy budgets of marine subsidence regions, *NASA Energy and Water Cycle Science Team Meeting*, Greenbelt, MD, May 1, 2013.
- \*DePasquale, A., C. Schumacher, **A. D. Rapp:** Radar observations of MJO and Kelvin wave interactions during DYNAMO/CINDY2011/AMIE, *MJO Field Data and Science Workshop*, Kohala Coast, HI, March 5, 2013.
- Rapp, A. D.,** Comparison of observational and CMIP5 interannual cloud forcing response in the southeastern Pacific, *AMS Annual Meeting*, Austin, TX, January 10, 2013.
- Conlee, D. S.L. Nasiri, and **A. D. Rapp:** Teaching meteorological and observing fundamentals through high-impact learning, *AMS Annual Meeting*, Austin, TX, January 8, 2013.
- Rapp, A. D.,** M. Lebsock, and T. L'Ecuyer: On precipitation in the southeastern Pacific marine subsidence region, *AGU Fall Meeting*, San Francisco, CA, December 7, 2012.
- Rapp, A. D.,** M. Lebsock, and T. L'Ecuyer: Understanding precipitation in southeastern Pacific marine low clouds, *Joint CALIPSO CloudSat Earthcare Science Workshop*, Paris, France, June 19, 2012.
- M. Lebsock, T. L'Ecuyer, J. Haynes, and **A. D. Rapp:** A view of warm rain from CloudSat. *CloudSat/CALIPSO Science Team Meeting*, Montreal, Quebec, June 17, 2011.
- Rapp, A. D.:** View of VOCALS region from CloudSat, *NOAA PSD 3 Branch Meeting*, Boulder, CO, September 18, 2009.
- Fairall, C.F. and **A.D. Rapp:** CloudSat case study and preliminary look at observations from VOCALS, *2<sup>nd</sup> VOCALS Science Meeting*, Seattle, WA, July 12–14, 2009.
- Rapp, A. D.** and C. Kummerow: The relation between SST, precipitation and wave structures across the equatorial Pacific, *AMSR Science Team Meeting*, Telluride, CO, July 14, 2008.
- Rapp, A. D.,** C. Kummerow, G. Elsaesser: On the effects of warm rain clouds in the Tropics, *Third International NASA/JAXA TRMM Science Conference*, Las Vegas, NV, February 4–8, 2008.
- Rapp, A. D.** and C. Kummerow: Influence of SST on cloud properties of warm rain systems, *Joint EUMETSAT Meteorological Satellite & 15th AMS Satellite Meteorology and Oceanography Conference*, Amsterdam, The Netherlands, September 24–28, 2007.
- Rapp, A. D.,** C. Kummerow, T. Matsui: Impact of SST and water vapor on cloud properties of warm rain systems, *EGU General Assembly*, Vienna, Austria, April 2–7, 2006.
- Rapp, A. D.** and C. Kummerow: The role of warm rain systems in the Tropics?, *31st International Symposium on Remote Sensing of Environment*, St. Petersburg, Russia, June 20–24, 2005.
- Rapp, A. D.,** C. Kummerow, W. Berg, B. Griffith: Evaluation of the adaptive infrared iris hypothesis using TRMM satellite measurements, *AGU Fall Meeting*, San Francisco, CA, December 8–12, 2003.
- Rapp, A. D.:** Evaluation of the adaptive infrared iris using TRMM satellite measurements, Guest Lecture for *Colorado State University Dept. of Atmospheric Science AT753 Course*, Fort Collins, CO, March 12, 2003.

- Rapp, A. D.**, D. R. Doelling, M. M. Khaiyer, P. Minnis, W. L. Smith, Jr., L. Nguyen: Analysis of solar absorption derived from ARM surface and satellite measurements, *11th AMS Conference on Atmospheric Radiation*, Ogden, UT, June 3–7, 2002.
- Smith, W. L., Jr., P. Minnis, B. C. Bernstein, **A. D. Rapp**, P. W. Heck: Supercooled liquid water cloud properties derived from GOES: Comparisons with in-situ aircraft measurements, *10th AMS Conference on Aviation, Range, and Aerospace Meteorology*, Portland, OR, May 13–16, 2002.
- Rapp, A.D.**, D. R. Doelling, P. Minnis, W. L. Smith, Jr.: Comparison of TOA shortwave albedo and atmospheric solar absorption derived from GOES-8, CERES, aircraft, and surface measurements during ARESE II with model calculations, *Chapman Conference on Atmospheric Absorption of Solar Radiation*, Estes Park, CO, August 13–17, 2001.
- Heck, P.W., **A. D. Rapp**, Minnis, P., W. L. Smith, Jr., L. Nguyen: Remotely sensed cloud properties for ARM SGP, *ARM GCSS-SCM Cloud Working Group Meeting*, Boulder, CO, October, 2001.
- Doelling, D. R., **A. D. Rapp**, M. M. Khaiyer, P. Minnis, W. L. Smith, Jr., L. Nguyen, M. P. Haeffelin, T. Tooman, F. P. J. Valero, S. Asano: Cloud radiative forcing derived during ARESE-2, *IAMAS 8th Scientific Assembly*, Innsbruck, Austria, July 10–18, 2001.
- Minnis, P., W. L. Smith, Jr., L. Nguyen, **A. D. Rapp**, D. R. Doelling: Remotely sensed cloud properties and TOA validation, *ARESE II Science Team Meeting*, Atlanta, GA, February 8–9, 2001.
- Minnis, P., W. L. Smith, Jr., **A. D. Rapp**, D. R. Doelling: TOA radiation validation, radiative forcing, and atmospheric absorption estimation, *ARESE II Science Team Meeting*, San Antonio, TX, October 24–26, 2000.

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**CONTRIBUTED POSTER PRESENTATIONS** (\*GRADUATE STUDENT; #UNDERGRADUATE STUDENT)

- \*Smalley, K.M., and **A. D. Rapp**: A-Train estimates of the sensitivity of warm rain likelihood and efficiency to cloud size. *AGU Fall Meeting*, San Francisco, CA, December 2019.
- \*Wodzicki, K.R., and **A. D. Rapp**: Convective population variations with ITCZ width in the Pacific and Atlantic Oceans. *AGU Fall Meeting*, San Francisco, CA, December 2019.
- \*Smalley, K.M., and **A. D. Rapp**: Cloud size impacts on precipitation likelihood in different environments using CloudSat. *Gordon Research Conference on Radiation and Climate*, Lewiston, ME, July 2019.
- \*Smalley, K.M., and **A. D. Rapp**: Differences in characteristics of precipitating and non-precipitating warm clouds. *AMS 98<sup>th</sup> Annual Meeting*, Austin, TX, January 2018.
- \*Howard, C. S., **A. D. Rapp**, and K.R. Wodzicki: How well does ERA-Interim capture ITCZ characteristics and precipitation? *AMS 98<sup>th</sup> Annual Meeting*, Austin, TX, January 2018.
- #Slaughter, N., **A. D. Rapp**, \*K. Wodzicki, and \*K. Smalley: Cloud structures in the Pacific ITCZ using CloudSat-CALIPSO, *AGU Fall Meeting*, New Orleans, LA, December, 2017
- Hakuba, M.Z., G.L. Stephens, T. Lee, **A. D. Rapp**: MA Balmaseda, Does the hemispheric energy imbalance set the mean location of the ITCZ, *EGU General Assembly*, Vienna, Austria, April 2017.
- #Smith, E., **A. D. Rapp**, and \*K. Wodzicki: Frequency of mid-tropospheric dry layers in the tropical Pacific ITCZ using ERA-Interim reanalysis, *16<sup>th</sup> AMS Student Conference*, Seattle, WA, January 2, 2017.

- \*Sun, L., and **A. D. Rapp**: Sensitivity of precipitating cloud radiative efficiencies to the environment using A-Train and reanalysis data, *AGU Fall Meeting*, San Francisco, CA, December 12, 2016.
- #Smith, E., **A. D. Rapp**, and \*K. Wodzicki: Frequency of mid-tropospheric dry layers in the tropical Pacific ITCZ using ERA-Interim reanalysis, *AGU Fall Meeting*, San Francisco, CA, December 16, 2016.
- \*Ren, T., **A. D. Rapp**, J. R. Mecikalski, J. Apke, L. D. Carey, and S. L. Nasiri: Applying satellite aerosol retrievals for lightning prediction in northern Alabama, *21<sup>st</sup> AMS Conference on Satellite Meteorology and Oceanography*, Madison, WI, August, 17, 2016.
- #Schirle, C., **A. D. Rapp**, and \*A. Zapalac: Assessing the southeast Pacific stratocumulus cloud fraction transition in MERRA using CloudSat/CALIPSO, *AMS 15<sup>th</sup> Annual Student Conference*, New Orleans, LA, January 10, 2016.
- #Schirle, C., **A. D. Rapp**, and \*A. Zapalac: Assessing the southeast Pacific stratocumulus cloud fraction transition in MERRA using CloudSat/CALIPSO, *AGU Fall Meeting*, San Francisco, CA, December 18, 2015.
- \*Marter, R., and **A. D. Rapp**: Passive microwave precipitation detection biases: Relationship to cloud morphology, *AGU Fall Meeting*, San Francisco, CA, December 14, 2015.
- \*Viramontez, A., and **A. D. Rapp**: Passive microwave precipitation detection biases: Relationship to environment, *AGU Fall Meeting*, San Francisco, CA, December 14, 2015.
- Rapp, A. D.**, and \*K. Wodzicki: Linking subtropical shallow convection, moisture transport, and ITCZ characteristics in the Pacific, *GEWEX ESA-ESRIN Earth Observation for Water Cycle Science*, Frascati, Italy, October 20, 2015.
- Rapp, A. D.**, and \*K. Wodzicki: Automated identification and characterization of the ITCZ using TRMM, GPCP, and ERA-Interim, *NASA Precipitating Measuring Missions Science Team Meeting*, Baltimore, MD, August 5, 2015.
- Rapp, A. D.**, and \*A. Zapalac: Multiscale impacts of precipitation on cloud fraction transitions, *Gordon Research Conference on Climate & Radiation*, Lewiston, ME, July 27, 2015.
- Bentamy, A., R. Pinker, B. Zhang, **A. D. Rapp**, and Y. Ma: Net energy budget at the surface interface of the "Cold Tongue" region, *EGU General Assembly*, Vienna, Austria, April 16, 2015.
- Rapp, A. D.**, R. Bennartz, J. Jiang, S. Kato, W. Olson, R. Pinker, H. Su, and P. Taylor: Subtropical low cloud responses to central and eastern Pacific El Nino events, *AGU Fall Meeting*, San Francisco, CA, December 18, 2014.
- \*Wodzicki, K., and **A. D. Rapp**: Relationships between subtropical warm precipitation features and lower tropospheric water vapor, *AGU Fall Meeting*, San Francisco, CA, December 15, 2014.
- Quiring, S., \*T. Ford, and **A. D. Rapp**: Does rain fall preferentially over wet or dry soils?, *AGU Fall Meeting*, San Francisco, CA, December 15, 2014.
- Rapp, A. D.**: Characteristics of the southeastern Pacific stratocumulus to cumulus transition using CloudSat/CALIPSO, *CALIPSO/CloudSat Science Team Meeting*, Alexandria, VA, November 5, 2014.
- \*Wodzicki, K., and **A. D. Rapp**: Relationship between shallow convection and lower tropospheric water vapor, *NASA Precipitating Measuring Missions Science Team Meeting*, Baltimore, MD, August 5, 2014.
- Rapp, A. D.**, and T. L'Ecuyer, Cloud and precipitation impacts on the energy budget of low cloud regimes, *AGU Fall Meeting*, San Francisco, CA, December 12, 2013.

- \*Teale, N.G., #H. Mahan, #S. Bleakney, #A. Berger, O.W. Frauenfeld, **A. D. Rapp**, S.M. Quiring, E.B. Roark: Impacts of vegetation and precipitation on throughfall heterogeneity in a tropical pre-montane transitional cloud forest, *AGU Fall Meeting*, San Francisco, CA, December 10, 2013.
- Rapp, A. D.**: Local and remote effects of subtropical cumulus convection, *NASA Precipitating Measuring Missions Science Team Meeting*, Annapolis, MD, March 19, 2013.
- \*DePasquale, A., C. Schumacher, **A. D. Rapp**: Radar observations of MJO and Kelvin wave interactions during DYNAMO/CINDY2011/AMIE, *MJO Field Data and Science Workshop*, Kohala Coast, HI, March 5, 2013.
- \*DePasquale, A., C. Schumacher, **A. D. Rapp**: Radar observations of MJO/wave interactions during DYNAMO/CINDY2011/AMIE, *AMS Annual Meeting*, Austin, TX, January 10, 2013.
- \*Sutphin, A. B., S. Nasiri, **A. D. Rapp**: Determining precipitation probability of tropical midlevel clouds using satellite observations, *AMS Annual Meeting*, Austin, TX, January 9, 2013.
- #Peterson, A., **A. D. Rapp**, O. W. Frauenfeld, S. Quiring, E. B. Roark: Characteristics of precipitating systems over Costa Rica using TRMM, *AMS Annual Meeting*, Austin, TX, January 7, 2013.
- #Shibley, N., #N. Teale, #E. R. Morris, S. M. Quiring, O. W. Frauenfeld, E. B. Roark, **A. D. Rapp**: Characterizing spatial variability in precipitation and throughfall in a tropical pre-montane cloud forest, *AMS Annual Meeting*, Austin, TX, January 7, 2013.
- \*DePasquale, A., C. Schumacher, **A. D. Rapp**: Radar observations of MJO/wave interactions during DYNAMO/CINDY2011/AMIE, *AGU Fall Meeting*, San Francisco, CA, December 4, 2012.
- Washington-Allen, R.A., #E.H. Buckwalter, G.W. Moore, #J.N. Burns, #A.R. Dennis, #O. Dodge, #E.C. Guffin, #E.R. Morris, #R.P. Oien, #G. Orozco, #A. Peterson, #N.G. Teale, #N.C. Shibley, #N. Tourtellotte, C. Houser, S.D. Brooks, J.K. Brumbelow, A.T. Cahill, O.W. Frauenfeld, E. Gonzalez, C.T. Hallmark, K.J. McInnes, G.R. Miller, C. Morgan, S.M. Quiring, **A. D. Rapp**, E.B. Roark, A. Delgado, J.P. Ackerson, R. Arnott: Exploratory Water budget analysis of a transitional premontane cloud forest in Costa Rica through undergraduate research, *AGU Fall Meeting*, San Francisco, CA, December 5, 2012.
- #Teale, N.G., #N.C. Shibley, #E.R. Morris, #A. Peterson, S.M. Quiring, O.W. Frauenfeld, E.B. Roark, **A. D. Rapp**: Microscale throughfall and precipitation heterogeneity in a transitional cloud forest, *AGU Fall Meeting*, San Francisco, CA, December 5, 2012.
- Houser, C., A. T. Cahill, S. Brooks, O. W. Frauenfeld, K. Lemmons, K. J. McInnes, G. Miller, G. W. Moore, S. Quiring, **A. D. Rapp**, E. B. Roark, G. W. Schade, C. Schumacher, M. Tjoelker, and R. A. Washington-Allen, 2011: Eco-hydrology of a tropical montane cloud forest: A new REU site hosted by Texas A&M University, *AGU Fall Meeting*, San Francisco, CA, December 5–9, 2011.
- Rapp, A. D.**: Evaluation of model differences in the cloud forcing response of the southeastern Pacific marine subsidence region, *World Climate Research Programme Open Science Conference*, Denver, CO, October 24–28, 2011.
- Rapp, A. D.**, and M. Lebsock: Climatology of precipitating marine stratocumulus in the southeastern Pacific, *CloudSat/CALIPSO Science Team Meeting*, Montreal, Quebec, June 14–17, 2011.

- Rapp, A. D.:** Precipitating marine stratocumulus in the southeastern Pacific with CloudSat, *A-Train Symposium*, New Orleans, LA, October 25–28, 2010.
- Rapp, A. D.,** C. Kummerow, W. Berg: On the ratio of cold cloud area to rainfall as a function of the underlying SST, *8th International Conference on Precipitation*, Vancouver, British Columbia, Canada, August 8–11, 2004.
- Dong, X., P. Minnis, G. G. Mace, W. L. Smith, Jr., M. Poellot, R. T. Marchand, **A. D. Rapp:** Comparison of stratus cloud properties deduced from surface, GOES, and aircraft data during the March 2000 ARM Cloud IOP, *13th ARM Science Team Meeting*, Broomfield, CO, March 31–April 4, 2003.
- Khaiyer, M. M., J. Huang, P. Minnis, B. Lin, W. L. Smith, Jr., A. Fan, **A. D. Rapp:** Validation of satellite-derived liquid water paths using ARM SGP microwave radiometers, *13th ARM Science Team Meeting*, Broomfield, CO, March 31–April 4, 2003.
- Kawamoto, K., P. Minnis, W. L. Smith, Jr., **A. D. Rapp:** Detecting multilayer clouds using satellite solar and IR channels, *11th AMS Conference on Atmospheric Radiation*, Ogden, UT, June 3–7, 2002.
- Dong, X., P. Minnis, G. G. Mace, W. L. Smith, Jr., M. Poellot, R. T. Marchand, **A. D. Rapp:** Comparison of stratus cloud properties deduced from surface, GOES, and aircraft data during the March 2000 ARM Cloud IOP, *11th AMS Conference on Atmospheric Radiation*, Ogden, UT, June 3–7, 2002.
- Ayers, J. K., P. W. Heck, **A. D. Rapp**, P. Minnis, D. F. Young, W. L. Smith, Jr., L. Nguyen: A one-year climatology of cloud properties derived from GOES-8 over the southeastern Pacific for PACS, *11th AMS Conference on Cloud Physics*, Ogden, UT, June 3–7, 2002.
- Chakrapani, V., D. R. Doelling, **A. D. Rapp**, P. Minnis: Cloud thickness estimation from GOES-8 satellite data over the ARM-SGP site, *12th ARM Science Team Meeting*, St. Petersburg, FL, April 8–12, 2002.
- Heck, P. W., **A. D. Rapp**, P. Minnis, W. L. Smith, Jr., L. Nguyen: An improved technique for retrieval of cloud properties at night and in low sun conditions, *12th ARM Science Team Meeting*, St. Petersburg, FL, April 8–12, 2002.
- Khaiyer, M. M., **A. D. Rapp**, P. Minnis, W. L. Smith, Jr., D. R. Doelling, L. Nguyen, Q. Min: Evaluation of a 5-year cloud and radiative property dataset derived from GOES-8 data over the Southern Great Plains, *12th ARM Science Team Meeting*, St. Petersburg, FL, April 8–12, 2002.
- Minnis, P., W. L. Smith, Jr., **A. D. Rapp**, P. W. Heck, D. F. Young, L. Nguyen, M. M. Khaiyer: Near-real-time retrieval of cloud properties over the ARM CART area from GOES Data, *12th ARM Science Team Meeting*, St. Petersburg, FL, April 8–12, 2002.
- Nguyen, L., P. Minnis, D. F. Young, W. L. Smith, Jr., P. W. Heck, **A. D. Rapp:** Use of multi-resolution imager data to account for partially cloud-filled pixels, *12th ARM Science Team Meeting*, St. Petersburg, FL, April 8–12, 2002.
- Nordeen, M. L., D. R. Doelling, M. M. Khaiyer, **A. D. Rapp**, P. Minnis: A climatology of cloud & radiative properties derived from GMS-5 data over the Tropical Western Pacific, *12th ARM Science Team Meeting*, St. Petersburg, FL, April 8–12, 2002.
- Minnis, P., W. L. Smith, Jr., D. F. Young, L. Nguyen, **A. D. Rapp**, P. W. Heck, S. Sun-Mack, Q. Z. Trepte, Y. Chen: A near-real time method for deriving cloud and radiation properties from satellites for weather and climate studies, *11th AMS Conference on Satellite Meteorology and Oceanography*, Madison, WI, October 15–18, 2001.



- Ayers, J. K., P. W. Heck, **A. D. Rapp**, P. Minnis, W. L. Smith, Jr., C. W. Fairall, S. Frisch: Validation of cloud properties derived from geostationary satellite data over the southeastern Pacific, *IAMAS 8th Scientific Assembly*, Innsbruck, Austria, July 10–18, 2001.
- Rapp, A. D.**, D. R. Doelling, M. M. Khaiyer, P. Minnis, W. L. Smith, Jr., L. Nguyen, M. P. Haeffelin, F. P. J. Valero, S. Asano: Comparison of shortwave cloud radiative forcing derived from ARM SGP surface and GOES-8 satellite measurements during ARESE-I and ARESE-II, *11th ARM Science Team Meeting*, Atlanta, GA, March 19–23, 2001.
- Khaiyer, M. M., **A. D. Rapp**, D. R. Doelling, M. L. Nordeen, P. Minnis, W. L. Smith, Jr., L. Nguyen: A 3-year climatology of cloud and radiative properties derived from GOES-8 data over the Southern Great Plains, *11th ARM Science Team Meeting*, Atlanta, GA, March 19–23, 2001.
- Nordeen, M. L., D. R. Doelling, M. M. Khaiyer, **A. D. Rapp**, P. Minnis, L. Nguyen: GMS-5 satellite-derived cloud properties over the Tropical Western Pacific, *11th ARM Science Team Meeting*, Atlanta, GA, March 19–23, 2001.

#### **FIELD EXPERIENCE**

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- Scientist* for NOAA PSD flux calibration facility onboard R/V *Kilo Moana* during WHOTS-6 mooring operation, Honolulu, Hawaii, 2009.
- Satellite retrieval team* for CRYSTAL-FACE, Key West, Florida, 2002.
- Assistant scientist* for TRMM KWAJEX, Kwajalein Atoll, Republic of the Marshall Islands, 1999.
- Aggie Doppler Radar operator* for TRMM TEFLUN-A experiment, College Station, TX, 1998.