

DARREN S. MCKAGUE

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Summary

I am an experienced geoscientist and satellite systems engineer with a passion for understanding the Earth's environment as demonstrated through involvement in multiple missions for the remote sensing of the Earth's surface, atmosphere, weather, and climate.

Education

Wayne State University (Detroit, MI)	Physics	B.S., Summa cum Laude	1993
University of Colorado (Boulder, CO)	Astrophysical, Planetary, and Atmospheric Sciences	M.S.	1995
University of Colorado (Boulder, CO)	Astrophysical, Planetary, and Atmospheric Sciences	Ph.D.	2001

Professional Experience

- Extensive experience with satellite mission development and execution for study of Earth's environment including mission development, instrument design, systems engineering, system modelling and simulation, geophysical parameter retrieval, and instrument design.
- Extensive management experience for spaceflight missions/organizations including management of projects, staffing, operations, research and development activities, and new business capture.
- Considerable experience with satellite instrument engineering including as cognizant engineer for instrument calibration subsystems, lead systems engineer, mission requirements development and management, and system end-to-end modelling.
- Academic advisor for over 150 Masters of Engineering students, co-advisor for 3 Ph.D. students, and lecturer on multiple graduate level satellite systems engineering courses.
- Played direct role on following spaceflight missions:
 - CYGNSS, GPM-GMI, Suomi NPP-OMPS, MOMA-MS, SO-HIS, MAVEN-NGIMS, MSL-SAM, LADEE-NMS, and Mars 2020-PIXL.

Professional Appointments

09/2015 – present	Associate Research Scientist, Department of Climate and Space Sciences and Engineering, University of Michigan
09/2009 – 08/2015	Assistant Research Scientist, Department of Climate and Space Sciences and Engineering, University of Michigan
01/2008 – 08/2009	Research Investigator, Department of Climate and Space Sciences and Engineering, University of Michigan
01/2013 – 04/2015	Assistant Director, Space Physics Research Laboratory, University of Michigan
01/2008 – 12/2012	Adjunct Lecturer and Academic Advisor MEng in Space Systems, Department of Climate and Space Sciences and Engineering, University of Michigan
12/2002 – 12/2007	Principal Systems Engineer, Ball Aerospace & Technologies Corporation, Boulder, CO
04/2001 – 11/2002	Research Scientist, Cooperative Institute for Research in the Atmosphere, Colorado State University
08/1999 – 03/2001	Systems Engineer, Raytheon Systems Inc., Aurora, CO

Professional Memberships

- American Geophysical Union (AGU) , 2008 - present
- American Meteorological Society (AMS) , 1993 - present
- Institute of Electrical and Electronics Engineers (IEEE), 2008 - present

Honors and Awards

- **NASA Group Achievement Award**, Global Precipitation Measurement Post-Launch Team, 2015.
- **Thomas M. Sawyer, Jr. Teaching Award**, University of Michigan College of Engineering, 2012.
- **AOSS Faculty Award**, University of Michigan College of Engineering, 2011.
- **Outstanding Achievement Award**, Ball Aerospace & Technologies Corp., 2003, 2005.
- **ATOC Exceptional Service Award** for outstanding contributions, University of Colorado, 2008.
- **Vaden W. Miles Award** for top ranked graduate, Physics Department, Wayne State University, 1993.

Technology Transfer and Entrepreneurship

- Co-author, NASA New Technology Report “CYGNSS Delay Doppler Map Level 1 Calibration Software,” filed April 2022.

Personal Interests

- Horses – trail riding, natural horsemanship, therapeutic riding volunteer
- Outdoor activities – hiking, biking, running

Publications

Articles in refereed publications

1. S. Gleason, M. M. Al-Khaldi, C. S. Ruf, D. S. McKague, T. Wang and A. Russel, "Characterizing and Mitigating Digital Sampling Effects on the CYGNSS Level 1 Calibration," in IEEE Transactions on Geoscience and Remote Sensing, vol. 60, pp. 1-12, 2022, Art no. 5802812, doi: 10.1109/TGRS.2021.3120026.
2. T. Wang, , C. Ruf; S. Gleason; A. O'Brien; D. McKague; B. Block; A. Russel, "Dynamic Calibration of GPS Effective Isotropic Radiated Power for GNSS-Reflectometry Earth Remote Sensing," in IEEE Transactions on Geoscience and Remote Sensing, vol. 60, pp. 1-12, 2022, Art no. 5800512, doi: 10.1109/TGRS.2021.3070238.
3. Ruf, C., Asharaf, S., Balasubramaniam, R., Gleason, S., Lang, T., McKague, D., Twigg, D., & Waliser, D. (2019). In-Orbit Performance of the Constellation of CYGNSS Hurricane Satellites, Bulletin of the American Meteorological Society, 100(10), 2009-2023. Retrieved Aug 18, 2022, from <https://journals.ametsoc.org/view/journals/bams/100/10/bams-d-18-0337.1.xml>.
4. Berg W, Kroodsma R, Kummerow CD, McKague DS. Fundamental Climate Data Records of Microwave Brightness Temperatures. Remote Sensing. 2018; 10(8):1306. <https://doi.org/10.3390/rs10081306>.
5. S. Gleason, C. S. Ruf, A. J. O'Brien and D. S. McKague, "The CYGNSS Level 1 Calibration Algorithm and Error Analysis Based on On-Orbit Measurements," in IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, vol. 12, no. 1, pp. 37-49, Jan. 2019, doi: 10.1109/JSTARS.2018.2832981.
6. Kroodsma, R., Bilanow, S., & McKague, D. (2018). TRMM Microwave Imager (TMI) Alignment and Along-Scan Bias Corrections, Journal of Atmospheric and Oceanic Technology, 35(7), 1457-1470. Retrieved Aug 18, 2022, from <https://journals.ametsoc.org/view/journals/atot/35/7/jtech-d-17-0221.1.xml>.
7. C. S. Ruf, S. Gleason and D. S. McKague, "Assessment of CYGNSS Wind Speed Retrieval

- Uncertainty," in IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, vol. 12, no. 1, pp. 87-97, Jan. 2019, doi: 10.1109/JSTARS.2018.2825948.
8. T. Wang, C. S. Ruf, B. Block, D. S. McKague and S. Gleason, "Design and Performance of a GPS Constellation Power Monitor System for Improved CYGNSS L1B Calibration," in IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, vol. 12, no. 1, pp. 26-36, Jan. 2019, doi: 10.1109/JSTARS.2018.2867773.
 9. RA Kroodsma, DS McKague, CS Ruf, 2016, "Vicarious cold calibration for conical scanning microwave imagers," IEEE Transactions on Geoscience and Remote Sensing 55 (2), 816-827, doi: 10.1109/TGRS.2016.2615552.
 10. Wesley Berg, Stephen Bilanow, Ruiyao Chen, Saswati Datta, David Draper, Hamideh Ebrahimi, Spencer Farrar, W Linwood Jones, Rachael Kroodsma, Darren McKague, Vivienne Payne, James Wang, Thomas Wilheit, John Xun Yang, 2016, "Intercalibration of the GPM Microwave Radiometer Constellation," Journal of Atmospheric and Oceanic Technology 33 (12), 2639-2654, doi: 10.1175/JTECH-D-16-0100.1.
 11. J. X. Yang, DS McKague, CS Ruf, 2016, "Uncertainties in radiometer intercalibration associated with variability in geophysical parameters," Journal of Geophysical Research: Atmospheres 121 (19), doi: 10.1002/2016JD024937.
 12. J. X. Yang and D. S. McKague, "Improving Collocation-Based Scan-Dependent Intercalibration Over the Ocean for Spaceborne Radiometry," in IEEE Geoscience and Remote Sensing Letters, vol. 13, no. 4, pp. 589-593, April 2016, doi: 10.1109/LGRS.2016.2528261.
 13. J. X. Yang, D. McKague, C. S. Ruf, 2016, "Boreal, Temperate, and Tropical Forests as Vicarious Calibration Sites for Spaceborne Microwave Radiometry," IEEE Transactions on Geoscience Remote Sensing, vol. 54, no. 2, p. 1035-1051, doi: 10.1109/TGRS.2015.2472532.
 14. D. Draper, D. Newell, D. McKague, J. Peipemeier, 2015, "Assessing calibration stability using the Global Precipitation Mission (GPM) Microwave Imager (GMI) Noise Diodes," IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, vol. PP, no. 99, p. 1-9, doi: 10.1109/JSTARS.2015.2406661.
 15. J. X. Yang, D. McKague, C. Ruf, 2014, "Land contamination correction for passive microwave radiometer data: Demonstration of wind retrieval in the Great Lakes using SSM/I," Journal of Atmospheric and Oceanic Technology, 31, 2094-2113, doi: 10.1175/JTECH-D-13-00254.1.
 16. David R. DeBoer, Sandra L. Cruz-Pol, Michael M. Davis, Todd Gaier, Paul Feldman, Jasmeet Judge, Kenneth I. Kellermann, David G. Long, Loris Magnani, Darren McKague Member, Timothy Pearson, Alan E. E. Rogers, Steven C. Reising, Gregory Taylor, A. Richard Thompson, Liese van Zee, 2013, "Radio Frequencies: Policies and Management," IEEE Transactions on Geoscience and Remote Sensing, vol. 51, no. 10, p. 4978-4927, doi: 10.1109/TGRS.2013.2253471.
 17. R. A. Kroodsma, D. S. McKague, C.S. Ruf, 2013, "Extension of Vicarious Cold Calibration to 85-92 GHz for Spaceborne Microwave Radiometers," IEEE Transactions on Geoscience and Remote Sensing, vol. 51, no. 9, p. 4743-4751, doi: 10.1109/TGRS.2013.2267152.
 18. Sapiano, M. R. P., Berg, W. K., McKague, D., S., Kummerow, C. D., 2013, "Toward an Intercalibrated Fundamental Climate Data Record of the SSM/I Sensors," IEEE Transactions on Geoscience Remote Sensing, vol. 51, no. 3, p. 1492-1503, doi: 10.1109/TGRS.2012.2206601.
 19. R. A. Kroodsma, D. S. McKague, C.S. Ruf, 2012, "Inter-Calibration of Microwave Radiometers Using the Vicarious Cold Calibration Double Difference Method," IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, vol. 5, no. 3, p. 1006-1013, doi: 10.1109/JSTARS.2012.2195773.
 20. Darren McKague, C. S. Ruf, J. J. Puckett, 2011, "Beam Spoiling Correction for Spaceborne Microwave Radiometers Using the Two-Point Vicarious Calibration Method," IEEE Transactions on Geoscience and Remote Sensing, vol. 49, no. 1, p. 21-27, doi: 10.1109/TGRS.2010.2068052.
 21. E.A. Smith, P. Bauer, F.S. Marzano, C.D. Kummerow, D. McKague, A. Mugnai, and G. Panegrossi, 2002, "Intercomparison of microwave radiative transfer models in precipitating clouds," IEEE

- Transactions on Geoscience and Remote Sensing, vol. 40, p. 541-549, doi: 10.1109/TGRS.2002.1000314.
22. Darren McKague, K. Franklin Evans, 2002, "Multichannel Satellite Retrieval of Cloud Parameter Probability Distribution Functions," *Journal of the Atmospheric Sciences*, vol. 59, no. 8, p. 1371–1382, doi: 10.1175/1520-0469(2002)059<1371:MSROCP>2.0.CO;2.
 23. Garand, L., D.S. Turner, M. Larocque, J. Bates, S. Boukabar, P. Brunel, F. Chevallier, G. Deblonde, R. Engelen, M. Hollingshead, D. Jackson, G. Jedlovec, J. Joiner, T. Kleespies, D.S. McKague, L. McMillin, J.-L. Moncet, J.R. Pardo, P.J. Rayer, E. Salathe, R. Saunders, N.A. Scott, P. Van Delst, and H. Woolf, 2001, "Radiance and Jacobian intercomparison of radiative transfer models applied to HIRS and AMSU channels," *Journal of Geophysical Research*, vol. 106, p. 24017-24031, doi: 10.1029/2000JD000184.
 24. Darren McKague, K. Franklin Evans, Susan Avery, 1998, "Assessment of the Effects of Drop Size Distribution Variations Retrieved from UHF Radar on Passive Microwave Remote Sensing of Precipitation," *Journal of Applied Meteorology*, vol. 37, no. 2, p. 155–165, doi: 10.1175/1520-0450(1998)037<0155:AOTEOD>2.0.CO;2.
 25. R. Naik, A. Poli, D. McKague, A. Lukaszew, and L.E. Wenger, 1995, "Strain Induced Perpendicular Magnetic Anisotropy of <100>-Oriented Ni-Cu Superlattices," *Physical Review B*, vol. 51, p. 3549-3553, doi: 10.1103/PhysRevB.51.3549.

Refereed conference or symposium proceedings papers

1. Wang, Tianlin, Ruf, Christopher, Block, Bruce, McKague, Darren, Gleason, Scott, "Characterization of GPS L1 EIRP: Transmit Power and Antenna Gain Pattern," Proceedings of the 31st International Technical Meeting of the Satellite Division of The Institute of Navigation (ION GNSS+ 2018), Miami, Florida, September 2018, pp. 2879-2890. <https://doi.org/10.33012/2018.16101>
2. Todd Gaier, Pekka Kangaslahti, Bjorn Lambrigtsen, Isaac Ramos-Perez, Alan Tanner, Darren McKague, Christopher Ruf, Michael Flynn, Zhengya Zhang, Roger Backhus, David Austerberry, "A 180 GHz prototype for a geostationary microwave imager/sounder-GeoSTAR-III, Geoscience and Remote Sensing Symposium (IGARSS), 2016 IEEE International, pp. 2021-2023.
3. D. Austerberry, Gaier T., Kangaslahti P., Lambrigtsen, B., McKague D., Ramos, I., Ruf, C., and Tanner, A., 2015: "Test methodology for the GeoSTAR correlator," Geoscience and Remote Sensing Symposium (IGARSS), 2015 IEEE International, 26-31 July, Milan, Italy, 5162-5165.
4. T. Wilheit, Berg, W., Ebrahimi, H., Kroodsma, R., McKague, D., Payne, V., and Wang, J., 2015: "Intercalibrating the GPM constellation using the GPM Microwave Imager (GMI)," Geoscience and Remote Sensing Symposium (IGARSS), 2015 IEEE International, 26-31 July, Milan, Italy, 3473-3476.
5. D. McKague, J. J. Puckett and C. Ruf, "Characterization of K-band radio frequency interference from AMSR-E, WindSat and SSM/I," 2010 IEEE International Geoscience and Remote Sensing Symposium, 2010, pp. 2492-2494, doi: 10.1109/IGARSS.2010.5651860.
6. Rachel Trabert, Andrew Klesh, Patrick Senatore, Patrick Martinchek, Daniel Becker, Andrew Chou, Clark Hoffman, Clark Hoffman, Nathan McKay, Jeremy Nash, Jeffery Walters, James Cutler and Darren McKague. "The eXtensible Solar Array System: A Modular Nanosatellite Power System," AIAA 2010-7654. AIAA/AAS Astrodynamics Specialist Conference. August 2010, doi: 10.2514/6.2010-7654.
7. D. McKague, C. Ruf and J. J. Puckett, "Microwave radiometer inter-calibration using the vicarious calibration method," 2009 IEEE International Geoscience and Remote Sensing Symposium, 2009, pp. IV-117-IV-120, doi: 10.1109/IGARSS.2009.5417360.
8. D. McKague, T. H. Zurbuchen, T. Donajkowski, J. Ervin, D. Heckathorn, K. Moran, 2009, "IMAGINE Africa: Providing Internet to the Developing World," 2009 IEEE Aerospace Conference, Big Sky, USA, p. 804-812.
9. McKague, D. S., R. J. Engelen, J. M. Forsythe, S. W. Kidder, and T. H. VonderHaar, 2001. An

Optimal-Estimation Algorithm for Water Vapor Profiling Using AMSU. Proc. Of 11th Conf. on Sat. Meteor. And Ocean, 633-636.

Publications in popular press/magazines

1. Ruf, C., Asharaf, S., Balasubramaniam, R., Gleason, S., Lang, T., McKague, D., Twigg, D., & Waliser, D. (2019). In-Orbit Performance of the Constellation of CYGNSS Hurricane Satellites, *Bulletin of the American Meteorological Society*, 100(10), 2009-2023. Retrieved Aug 19, 2022, from <https://journals.ametsoc.org/view/journals/bams/100/10/bams-d-18-0337.1.xml>.
2. A Colliander, D McKague, "The Microwave Radiometer Working Group [Technical Committees]," *IEEE Geoscience and Remote Sensing Magazine* 4 (3), 69-72, doi: 10.1109/MGRS.2016.2588442.

Abstracts in non-refereed conference proceedings

1. T. Wang, C. Ruf, D. McKague, A. Russel, A. O'Brien and S. Gleason, "The Important Role of Antenna Pattern Characterization in the Absolute Calibration of GNSS-R Measurements," 2021 IEEE International Geoscience and Remote Sensing Symposium IGARSS, 2021, pp. 144-146, doi: 10.1109/IGARSS47720.2021.9554506.
2. T. Wang, C. Ruf, S. Gleason, D. McKague, A. O'Brien and B. Block, "Monitoring GPS EIRP for Cygnss Level 1 Calibration," IGARSS 2020 - 2020 IEEE International Geoscience and Remote Sensing Symposium, 2020, pp. 6293-6296, doi: 10.1109/IGARSS39084.2020.9324491.
3. C. Ruf, R. Backhus, T. Butler, C. Chen, S. Gleason, E. Loria., D. McKague, R. Miller, A. O'Brien, and L. van Nieuwstadt, "Next Generation GNSS-R Instrument," IGARSS 2020 - 2020 IEEE International Geoscience and Remote Sensing Symposium, 2020, pp. 3353-3356, doi: 10.1109/IGARSS39084.2020.9324588.
4. T. Wang et al., "Improvement of CYGNSS Level 1 Calibration Using Modeling and Measurements of Ocean Surface Mean Square Slope," IGARSS 2020 - 2020 IEEE International Geoscience and Remote Sensing Symposium, 2020, pp. 5909-5912, doi: 10.1109/IGARSS39084.2020.9323262.
5. D. S. McKague and C. S. Ruf, "On-Orbit Trending of CYGNSS Data," IGARSS 2019 - 2019 IEEE International Geoscience and Remote Sensing Symposium, 2019, pp. 8722-8724, doi: 10.1109/IGARSS.2019.8898395.
6. C. Ruf, D. McKague, M. Morris, D. Posselt and M. Moghaddam, "The GNSS-R Cygnss Mission: an Update," IGARSS 2019 - 2019 IEEE International Geoscience and Remote Sensing Symposium, 2019, pp. 5171-5172, doi: 10.1109/IGARSS.2019.8900604.
7. T. Wang, C. Ruf, S. Gleason, B. Block, D. McKague and A. O'Brien, "A Real-Time EIRP Level 1 Calibration Algorithm for the CYGNSS Mission Using the Zenith Measurements," IGARSS 2019 - 2019 IEEE International Geoscience and Remote Sensing Symposium, 2019, pp. 8725-8728, doi: 10.1109/IGARSS.2019.8900456.
8. C. Ruf, D. McKague and S. Gleason, "CYGNSS Smallsat Mission Design, Engineering Performance and Science Results," IGARSS 2019 - 2019 IEEE International Geoscience and Remote Sensing Symposium, 2019, pp. 5073-5074, doi: 10.1109/IGARSS.2019.8900271.
9. T. Wang, C. Ruf, B. Block and D. McKague, "Characterization of the Transmit Power and Antenna Pattern of the GPS Constellation for the CYGNSS Mission," IGARSS 2018 - 2018 IEEE International Geoscience and Remote Sensing Symposium, 2018, pp. 4011-4014, doi: 10.1109/IGARSS.2018.8518531.
10. C. Ruf, C. Bussy-Virat, D. McKague, A. Ridley and M. Morris, "Enabling Sampling Properties of the Cygnss Satellite Constellation," IGARSS 2018 - 2018 IEEE International Geoscience and Remote Sensing Symposium, 2018, pp. 277-280, doi: 10.1109/IGARSS.2018.8518454.
11. M. P. Clarizia, C. S. Ruf, S. Gleason, R. Balasubramaniam and D. McKague, "Generation of cygnss level 2 wind speed data products," 2017 IEEE International Geoscience and Remote Sensing Symposium (IGARSS), 2017, pp. 2647-2649, doi: 10.1109/IGARSS.2017.8127539.

12. T. Wang, C. Ruf, S. Gleason, B. Block, D. McKague and D. Provost, "Development of GPS constellation power monitor system for high accuracy calibration/validation of the cygnss LIB data," 2017 IEEE International Geoscience and Remote Sensing Symposium (IGARSS), 2017, pp. 1008-1011, doi: 10.1109/IGARSS.2017.8127125.
13. R. Balasubramaniam, C. S. Ruf, D. McKague, M. P. Clarizia and S. Gleason, "Calibration and validation processing for the CYGNSS wind speed retrieval algorithm," 2017 IEEE International Geoscience and Remote Sensing Symposium (IGARSS), 2017, pp. 4117-4120, doi: 10.1109/IGARSS.2017.8127906.
14. J. X. Yang, D. S. McKague, C. S. Ruf, H. Yang and F. Weng, "Examining GMI intercalibration dependence on the full dynamic range of brightness temperature using cold and warm end tie points," 2016 IEEE International Geoscience and Remote Sensing Symposium (IGARSS), 2016, pp. 864-867, doi: 10.1109/IGARSS.2016.7729219.
15. T. Gaier, P. Kangaslahti; B. Lambriksen; I. Ramos-Perez; A. Tanner; D. McKague; C. Ruf; M. Flynn; Z. Zhang; R. Backhus; D. Austerberry (2016), "A 180 GHz prototype for a geostationary microwave imager/sounder-GeoSTAR-III," 2016 IEEE International Geoscience and Remote Sensing Symposium (IGARSS), 2016, pp. 2021-2023, doi: 10.1109/IGARSS.2016.7729521.
16. T. Wilheit et al., "Intercalibrating the GPM constellation using the GPM Microwave Imager (GMI)," 2015 IEEE International Geoscience and Remote Sensing Symposium (IGARSS), 2015, pp. 5162-5165, doi: 10.1109/IGARSS.2015.7326996.
17. D. Austerberry et al., "Test methodology for the geostar correlator," 2015 IEEE International Geoscience and Remote Sensing Symposium (IGARSS), 2015, pp. 3473-3476, doi: 10.1109/IGARSS.2015.7326568.
18. J. X. Yang, D. S. McKague and C. S. Ruf, "Identifying and resolving a calibration issue with GMI," 2015 IEEE International Geoscience and Remote Sensing Symposium (IGARSS), 2015, pp. 2568-2571, doi: 10.1109/IGARSS.2015.7326336.
19. D. C. Austerberry, D. S. McKague and C. S. Ruf, "A low-power 64×64 ASIC 2-bit digital correlator," 2015 USNC-URSI Radio Science Meeting (Joint with AP-S Symposium), 2015, pp. 292-292, doi: 10.1109/USNC-URSI.2015.7303576.
20. A. Tanner, T. Gaier, P. Kangaslahti, B. Lambriksen, I. Ramos, D. McKague, M. Flynn, P. Knag, Z. Zhang, E. Ryman, A. Emrich, 2014, "Correlator Technologies for the PATH Mission – Accomplishments and Updates from a Systems Viewpoint," 2014 IEEE International Geoscience and Remote Sensing Symposium (IGARSS), Quebec City, Canada.
21. D. Austerberry, D. McKague, C. Ruf, 2014, "A Low-Power 5x5 Digital Correlator Prototype for GeoSTAR," 13th Specialist Meeting on Microwave Radiometry and Remote Sensing of the Environment, Pasadena, USA, March 24-27, 2014.
22. D. McKague, W. Berg, S. Farrar, L. Jones, R. Kroodsma, T. Wilheit, J. Yang, 2014, "GPM X-Cal Inter-Calibration of AMSR2," 13th Specialist Meeting on Microwave Radiometry and Remote Sensing of the Environment, Pasadena, USA, March 24-27, 2014.
23. R. Kroodsma, D. McKague, C. Ruf, 2013, "Effect of Microwave Radiometer Inter-calibration on Rainfall Accumulation for the Global Precipitation Measurement Mission," 2013 IEEE International Geoscience and Remote Sensing Symposium (IGARSS), Melbourne, Australia.
24. R. A. Kroodsma, D. S. McKague, C.S. Ruf, 2012, "Satellite Attitude Analysis Using the Vicarious Cold Calibration Method for Microwave Radiometers," 2012 IEEE International Geoscience and Remote Sensing Symposium (IGARSS), Munich, Germany, p. 2964-2967.
25. R. A. Kroodsma, D. S. McKague and C. S. Ruf, "Inter-Calibration of Microwave Radiometers Using the Vicarious Cold Calibration Double Difference Method," in IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, vol. 5, no. 3, pp. 1006-1013, June 2012, doi: 10.1109/JSTARS.2012.2195773.
26. R. A. Kroodsma, D. S. McKague, C.S. Ruf, 2011, "Robustness of the Vicarious Cold Calibration Algorithm in the Double Difference Method for GPM Inter-Calibration," 2011 IEEE International

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27. T. Wilhelm, W. Berg, L. Jones, R. Kroodsma, D. McKague, C. Ruf, M. Sapiano, 2011, "A Consensus Calibration Based on TMI and WindSat," 2011 IEEE International Geoscience and Remote Sensing Symposium (IGARSS), Vancouver, Canada, p.2641-2644.
 28. S. Curry, M. Ahlers, H. Elliot, S. Gross, D. McKague, S. Misra, J. Puckett, C. Ruf, 2010, "K-band Radio Frequency Interference Survey of Southeastern Michigan," 2010 IEEE International Geoscience and Remote Sensing Symposium (IGARSS), Honolulu, USA, p. 2486-2489.
 29. R. A. Kroodsma, D. S. McKague, C. S. Ruf, J. J. Puckett, 2010, "Stability of the Vicarious Cold Calibration Statistic for the GPM Constellation," 2010 IEEE International Geoscience and Remote Sensing Symposium (IGARSS), Honolulu, USA, p. 566-569.
 30. Darren S. McKague,, C. S. Ruf, J. J. Puckett, 2010, "Characterization of K-band Radio Frequency Interference from AMSR-E, WindSat and SSM/I," 2010 IEEE International Geoscience and Remote Sensing Symposium (IGARSS), Honolulu, USA, p. 2492-2494.
 31. A. Mims, R. Kroodsma, C. Ruf, D. McKague, 2010, "WindSat Retrieval of Ocean Surface Wind Speeds in Tropical Cyclones," 2010 IEEE International Geoscience and Remote Sensing Symposium (IGARSS), Honolulu, USA, p. 1831-1834.
 32. R. Kroodsma, D. McKague, J. Puckett and C. Ruf, "Stability of the vicarious cold calibration statistic for the GPM constellation," 2010 IEEE International Geoscience and Remote Sensing Symposium, 2010, pp. 566-569, doi: 10.1109/IGARSS.2010.5653555.
 33. C. Ruf, S. Curry, S. Misra, C. Keys, M. Ahlers, J. Hoch, H. Elliott, L. Marcoux, D. McKague, S. Gross, 2010, "Spectral Mapping of Radio-Frequency Interference at K-band using a Kurtosis Spectrometer," 11th Specialist Meeting on Microwave Radiometry and Remote Sensing of the Environment, Washington, D.C., USA, March 1-4, 2010.
 34. Darren S. McKague,, C. S. Ruf, J. J. Puckett, 2009, "Microwave Radiometer Inter-Calibration Using the Vicarious Calibration Method," 2009 IEEE International Geoscience and Remote Sensing Symposium (IGARSS), Cape Town, South Africa, p. 2497-2500.
 35. D. McKague, 2006, "Thermal Tests of a Microwave External Calibration Load," MicroRad '06 - 9th Specialist Meeting on Microwave Radiometry and Remote Sensing Applications, San Juan, Puerto Rico, USA, February 28 – March 03, 2006.
 36. B. Ruston, D. McKague, T. Vonder Haar, F. Z. Weng, 2002, "A Preliminary Look into Spectral Microwave Emissivities Over the Continental US," American Meteorological Society 11th Conference on Atmospheric Radiation, Ogden, USA, p. 211-214.
 37. McKague, Darren, K. Franklin Evans, Susan Avery, 1995, "Raindrop Size Distributions Retrieved from UHF and VHF Radars: Implications for Passive Microwave Remote Sensing of Precipitation," Proc. American Meteorological Society 27th Conference on Radar Meteorology, Vail, CO, USA, October 9-13, 1995.