

## CURRICULUM VITAE

### DUANE E. WALISER

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### AREAS OF INTEREST

Climate Dynamics, Ocean-Atmosphere Coupling, Tropical Meteorology, Global Climate Modeling, Applications of Observations to Model Evaluation and Improvement, Subseasonal / Madden-Julian Oscillation (MJO) Variability, Weather-Climate Linkages and their Predictability, Satellite Mission Formulation and Science.

### EDUCATION

|                             |   |
|-----------------------------|---|
| B.S. Physics                | Oregon State University, 1985.                    |
| B.S. Computer Science       | Oregon State University, 1985.                    |
| M.S. Physics                | University of California, San Diego (UCSD), 1987. |
| Ph.D. Physical Oceanography | Scripps Institution of Oceanography, UCSD, 1992.  |

### HONORS & AWARDS

NASA Group Achievement Award, obs4MIPs, 2015  
JPL People Leadership Award, 2014  
Fellow, American Meteorological Society, 2014  
JPL Earth Ventures Team Bonus Award, 2014  
JPL Magellan Award, 2012  
NASA Exceptional Achievement Award, 2010  
JPL Team Bonus Award, Aura MLS Cloud Ice, 2007  
NASA Group Achievement Award, Aura MLS Science Team, 2006  
JPL Team Bonus Award, EOS MLS Atmospheric Science Publications Team, 2005  
National Research Council Research Associate, 1992-93, declined.  
NOAA Postdoctoral Fellowship for Climate and Global Change, 1992-93.  
NASA Graduate Student Fellowship Recipient, 1988-1991.  
Oregon State University College of Science Jesse Hanson Scholarship, 1983-84.  
Oregon State University U. G. Dubach Academic Scholarship, 1981-82.  
Oregon Scholar, 1980.

### PROFESSIONAL EXPERIENCE

2010 - Present: Chief Scientist, Earth Science and Technology Directorate, Jet Propulsion Laboratory, Pasadena, CA.  
2007 - Present: Senior Research Scientist, Science Division, Jet Propulsion Laboratory, Pasadena, CA.  
2007 - Present: Adjunct Professor in the Department of Atmospheric and Oceanic Sciences and Fellow of the Joint Institute for Regional Earth System Science and Engineering (JIFRESSE), University of California, Los Angeles, CA.  
2004 - Present: Visiting Associate Faculty, Geological and Planetary Sciences, California Institute of Technology, Pasadena, CA.  
2014 - Present: Research Associate, Scripps Institution of Oceanography, University of California, San Diego, CA.

2004 - 2007: Principal Scientist, Water and Carbon Cycle Group, Science Division, Jet Propulsion Laboratory, Pasadena, CA.

2004 - 2011: Adjunct Associate Professor, Institute for Terrestrial and Planetary Atmospheres, Marine Science Research Center, State University of New York, Stony Brook, NY.

September 1999 – June 2004 Associate Professor, Institute for Terrestrial and Planetary Atmospheres, Marine Science Research Center, State University of New York, Stony Brook.

September 1993 – August 1999: Assistant Professor, Institute for Terrestrial and Planetary Atmospheres, Marine Sciences Research Center, State University of New York, Stony Brook.

June 1992 - August 1993: Postdoctoral Associate, Department of Atmospheric Sciences, University of California, Los Angeles. UCAR/NOAA Climate and Global Change Postdoctoral Fellowship Program.

September 1987 - May 1992: Research Assistant / Graduate Student, Physical Oceanography curriculum, Scripps Institution of Oceanography, University of California, San Diego. NASA Graduate Student Fellowship Program.

April - September 1987 : Research Assistant / Graduate Student in the Physics Department, University of California, San Diego. Model low-thrust/ion-engine vehicle in the Earth-moon system.

September 1986 - March 1987: Teaching Assistant, Department of Physics, University of California, San Diego.

June 1985 - August 1986: Software Engineer, GTE Government Systems, Mountain View, CA.

April 1983 - May 1985: Software Consultant, TGL, Inc., Corvallis, OR.

### **PROFESSIONAL AFFILIATIONS**

Member, American Geophysical Union

Member. American Meteorological Society

### **PUBLICATIONS – PEER REVIEWED**

#### **1990-1999**

1. Jury, M. R., and **D. E. Waliser**, 1990: Satellite Microwave Measurements of Atmospheric Water Vapour and Marine Wind Speed: Case Study Application, *S.A.J. Marine Sci.*, 9, 309-316.
2. Van Woert, M. L., R. H. Whritner, **D. E. Waliser**, D. H. Bromwich and J. C. Comiso, 1992: The Antarctic Research Center: A Source of Multi-Sensor Satellite Data for Polar Science, *Trans. Amer. Geo. Union*, 73, 65.
3. Jury, M. R., B. Pathack and **D. E. Waliser**, 1993: Satellite OLR and Microwave Data as a Proxy for Rainfall in the Southern Africa - Madagascar Region, *Int. J. Clim.*, 13, 257-269.
4. **Waliser, D. E.**, N. E. Graham, C. Gautier, 1993: Comparison of the Highly Reflective Cloud and Outgoing Longwave Data Sets for use in Estimating Tropical Deep Convection, *J. Climate*, 6, 331-353.
5. **Waliser, D. E.** and C. Gautier, 1993: A Global Climatology of the ITCZ. *J. Climate*, 6, 2162-2174.
6. **Waliser, D. E.** and N. E. Graham, 1993: Convective Cloud Systems and Warm-Pool SSTs: Coupled Interactions and Self-Regulation. *J. Geoph. Res.*, 98, 12881-12893.
7. **Waliser, D. E.**, and R. C. J. Somerville, 1994: The Preferred Latitudes of the Intertropical Convergence Zone. *J. Atmos. Sci.*, 51, 1619-1639.
8. **Waliser, D. E.**, B. Blanke, J. D. Neelin and C. Gautier, 1994: Shortwave Feedbacks and ENSO: Forced Ocean and Coupled Ocean-Atmosphere Modeling Experiments. *J. Geophys. Res.*, 99, 25109-25125.
9. Jury, M. R., B. Pathack, **D. E. Waliser**, 1994: Evolution and Variability of the ITCZ in the SW Indian Ocean: 1988-90, *Theor. Appl. Clim.*, 48, 187-194.
10. **Waliser, D. E.**, 1996: Formation and Limiting Mechanism for Very High SST: Linking the Dynamics and Thermodynamics. *J. Climate*, 9, 161-188.

11. **Waliser, D. E.**, 1996: Some Considerations on the Thermostat Hypothesis. *Bull. Amer. Met. Soc.*, 77, 357-360.
12. **Waliser, D. E.**, W. D. Collins and S. P. Anderson, 1996: An Estimate of the Surface Shortwave Cloud Forcing over the Western Pacific During TOGA COARE. *Geoph. Res. Let.*, 23, 519-522.
13. **Waliser, D. E.**, 1996: Climate Controls on High Sea Surface Temperatures. *World Resource Review*, 8, 289-310.
14. **Waliser, D. E.** and W. Zhou, 1997: Removing Satellite Equatorial Crossing Time Biases from the OLR and HRC data sets. *J. Climate*, 10, 2125-2146.
15. Jones, C., **D. E. Waliser** and C. Gautier, 1998: The Influence of the Madden Julian Oscillation on Ocean Surface Heat Fluxes and Sea Surface Temperature. *J. Climate*, 11, 1057-1072.
16. **Waliser, D. E.**, W. K. Lau, J. H. Kim, 1999: The Influence of Coupled Sea Surface Temperatures on the Madden Julian Oscillation: A Model Perturbation Experiment. *J. Atmos. Sci.*, 56, 333-358.
17. **Waliser, D. E.**, C. Jones, J. K. Schemm and N. E. Graham, 1999: A Statistical Extended-Range Tropical Forecast Model Based on the Slow Evolution of the Madden-Julian Oscillation. *J. of Climate*, 12, 1918-1939.
18. **Waliser, D. E.**, Z. Shi, J. Lanzante and A. Oort, 1999: The Hadley Circulation: Assessing Reanalysis and Sparse In-Situ Estimates. *Clim. Dyn.*, 15, 719-735..
19. **Waliser, D. E.**, R. A. Weller, R. D. Cess, 1999: Comparisons Between Buoy-Observed, Satellite-Derived and Modeled Surface Shortwave Flux over the Subtropical North Atlantic During the Subduction Experiment. *J. Geophys. Res.*, 104, 31,301-31,320.

## 2000

20. **Waliser, D. E.**, and T. Hogan, 2000: Analysis of NOGAPS Surface Heat Fluxes: Coupling To Convection, Cloud And Dynamical Processes. *J. Geoph. Res.*, 105, 4587-4606.
21. Jones, C., **D. E. Waliser**, J. K. Schemm, and W. K. Lau, 2000: Prediction skill of the Madden-Julian Oscillation in Dynamical Extended Range Forecasts. *Climate Dynamics*, 16, 273-289.

## 2001

22. Lucas, L. E., **D. E. Waliser**, J. E. Janowiak, B. Liebmann, 2001: Removing the Satellite Equatorial Crossing Time Biases from the Daily, Global Outgoing Longwave Radiation Data Set. *J. Climate*, 14, 2583-2605.
23. **Waliser, D. E.**, Z. Zhang, K. M. Lau, and J. H. Kim, 2001: Interannual Sea Surface Temperature Variability and the Predictability of Tropical Intraseasonal Variability. *J. Atmos. Sci.*, 58, 2595-2614.
24. Medovaya, M., **D. E. Waliser**, R. A. Weller, M. McPhaden, 2002: Assessing Ocean Buoy Shortwave Observations using Clear-Sky Model Calculations. *J. Geophys. Res.; Oceans.*, 107, No. C2, 10.1029/2000JC000558.

## 2002

25. Kang IS, Jin K, Wang, B., Lau KM, Shukla J, Schubert SD, **Waliser DE**, Krishnamurthy V, Stern WF, Satyan V, Kitoh A, Meeh GA, Kanamitsu M, Galin VY, Kim JK, Sumi A, Wu G, Liu Y, 2002: Intercomparison of the climatological variations of Asian summer monsoon precipitation simulated by 10 GCMs. *Clim. Dym.*, 19, 383-395.
26. Kang I.S., Jin K, Lau K.M., Shukla J., Krishnamurthy V., Schubert S.D., **Waliser D.E.**, Stern W.F., Satyan V., Kitoh A., Meeh G.A., Kanamitsu M., Galin V.Y., Kim J.K., Sumi A., Wu G., Liu Y., 2002: Intercomparison of GCM simulated anomalies associated with the 1997-98 El Niño. *J. Climate*, 15, 2791–2805
27. **Waliser, D. E.**, J. Ridout, S. Xie, and M. Zhang, 2002: Variational Objective Analysis for Atmospheric Field Programs: A Model Assessment, *J. Atmos. Sci.*, 59, 3436-3456.

28. Wu, M. L. C., S. Schubert, I. S. Kang, and **D. E. Waliser**, 2002: Forced and Free Intra-Seasonal Variability Over the South Asian Monsoon Region Simulated by 10 AGCMs, *J. Climate*, 15, 2862–2880.

### 2003

29. Myers, D., and **D. E. Waliser**, 2003: Three dimensional water vapor and cloud variations associated with the Madden-Julian Oscillation during Northern Hemisphere winter. *J. Climate*, 16, 929–950.
30. **Waliser, D. E.**, K. M. Lau, W. Stern, C. Jones, 2003: Potential Predictability of the Madden-Julian Oscillation, *Bull. Amer. Meteor. Soc.*, 84, 33-50.
31. Collimore, C. D. W. Martin, M. H. Hitchman, A. Huesmann, and **D. E. Waliser**, 2003: On the Relationship Between the QBO and Tropical Deep Convection, *J. Climate*, 16, No. 15, 2552–2568.
32. **Waliser, D. E.**, W. Stern, S. Schubert, K. M. Lau, 2003: Dynamic Predictability of Intraseasonal Variability Associated with the Asian Summer Monsoon, *Quart. J. Royal Meteor. Soc.*, 129, 2897–2925
33. **Waliser, D. E.**, R. Murtugudde, and L. Lucas, 2003: Indo-Pacific Ocean Response to Atmospheric Intraseasonal Variability. Part I: Austral Summer and the Madden-Julian Oscillation, *J. Geoph. Res. – Oceans*. 108, C5, 3160, 10.1029/2002JC001620.
34. **Waliser, D. E.**, K. Jin, I.-S. Kang, W. F. Stern, S. D. Schubert, M.L.C. Wu, K.-M. Lau, M.-I. Lee, V. Krishnamurthy, A. Kitoh, G. A. Meehl, V. Y. Galin, V. Satyan, S. K. Mandke, G. Wu, Y. Liu, and C.-K. Park, 2003: AGCM Simulations of Intraseasonal Variability Associated with the Asian Summer Monsoon, *Clim. Dyn.*, 21, 423-446.

### 2004

35. Jones, C., L. M. V. Carvalho, R. W. Higgins, **D. E. Waliser**, and J.-K. E. Schemm, 2004: Climatology of tropical intraseasonal convective anomalies. *J. Climate*, 17, 523-539.
36. Jones, C., **D. E. Waliser**, K. M. Lau, and W. Stern, 2004: The Madden-Julian Oscillation and its Impact on Northern Hemisphere Weather Predictability, *Mon. Wea. Rev.*, 132, 6, 1462–1471.
37. **Waliser, D. E.**, R. Murtugudde, and L. Lucas, 2004: Indo-Pacific Ocean Response to Atmospheric Intraseasonal Variability. Part II: Boreal Summer and the Intraseasonal Oscillation, *J. Geoph. Res. – Oceans*. 109, C03030, 10.1029/2003JC002002.
38. Jones, C., L. M. V. Carvalho, R. W. Higgins, **D. E. Waliser**, and J.-K. E. Schemm, 2004: A Statistical Forecast Model of Tropical Intraseasonal Convective Anomalies. *J. Climate*: 17, 11, 2078–2095.
39. Zheng, Y., **D. E. Waliser**, W. Stern, and C. Jones, 2004: The Role of Coupled Sea Surface Temperatures in the Simulation of the Tropical Intraseasonal Oscillation, *J. Climate*. 17, 4109-4134.
40. Jones, C., **D. E. Waliser**, K.-M. Lau and W. Stern, 2004: Global Occurrences of Extreme Precipitation and the Madden-Julian Oscillation: Observations and Predictability, *J. Climate*, 17, 4575-4589

### 2005

41. Liess, S., **D. E. Waliser**, and S. Schubert, 2005: Predictability studies of the intraseasonal oscillation with the ECHAM5 GCM. *J. Atmos. Sci.*, 62, 3320-3336.
42. **Waliser, D. E.**, R. Murtugudde, P. Strutton, J.-L. Li, 2005, Subseasonal Organization of Ocean Chlorophyll: Prospects for Prediction Based on the Madden-Julian Oscillation, *Geoph. Res. Lett.*, 32, L23602, doi:10.1029/2005GL024300.
43. Li, J.-L., **D. E. Waliser**, J. H. Jiang, D. L. Wu, W. Read, J. W. Waters, A. Tompkins, L. J. Donner, J. Chern, W.-K. Tao, R. Atlas, Y. Gu, K.L. Liou, A. Del Genio, M. Khairoutdinov, and A. Gettelman, 2005, Comparisons of EOS MLS Cloud Ice Measurements with ECMWF analyses and GCM Simulations: Initial Results, *Geoph. Res. Lett.*, 32, L18710, doi:10.1029/2005GL023788.

44. Jiang, X., D. B. A. Jones, R. Shia, **D. E. Waliser**, and Y. L. Yung, 2005, Spatial Patterns and Mechanisms of the Quasi-biennial Oscillation - Annual Beat of Ozone, *J. Geophys. Res.*, 110, D23308, doi:10.1029/2005JD006055.
45. Wu, M.-L. C., S. D. Schubert, M. J. Suarez, P. J. Pegion, and **D. E. Waliser**, 2005: Seasonality and Meridional Propagation of the MJO. *J. Climate*, *J. Atmos. Sci.*, 19, 1901-1921.

## 2006

46. **Waliser, D. E.**, K. Weickmann, R. Dole, S. Schubert, O. Alves, C. Jones, M. Newman, H-L Pan, A. Roubicek, S. Saha, C. Smith, H. van den Dool, F. Vitart, M. Wheeler, J. Whitaker, 2006: The Experimental MJO Prediction Project. *Bull. Amer. Meteorol. Soc.*, 87, 425-431.
47. Tian, B., **D. E. Waliser**, E. Fetzer, B. Lambrigtsen, Y. Yung, and B. Wang, 2006: Vertical Moist Thermodynamic Structure and Spatial-temporal Evolution of the Madden-Julian Oscillation in Atmospheric Infrared Sounder Observations. *J. Atmos. Sci.*, 63, 10, 2462-2485.
48. Lin, X., J.-L. Li, M. J. Suarez, A. M. Tompkins, **D. E. Waliser**, M. M. Rienecker, J. Bacmeister, J. Jiang, H.-T. Wu, C. M. Tassone, J. D. Chern, B. D. Chen, and H. Su, 2006: A View of Hurricane Katrina with Early 21st Century Technology, *EOS*, 87, No. 41, 433.
49. Su, H., **D. E. Waliser**, J. H. Jiang, J.-L. Li, W. G. Read, J. W. Waters, A. Thompkins, 2006: Relationships among upper tropospheric water vapor, clouds and SST: MLS observations, ECMWF analyses and GCM simulations, *Geophys. Res. Lett.*, 33, L22802, doi:10.1029/2006GL027582.
50. Tian, B., **D. E. Waliser**, E. Fetzer, 2006: Modulation of the Diurnal Cycle of Deep Convective Clouds by the Madden-Julian Oscillation. *Geophys. Res. Lett.*, 30, L20704, 10.1029/2006GL027752.

## 2007

51. Fu, X., B. Wang, **D. E. Waliser**, and T. Li, 2007: Impact of Atmosphere-Ocean Coupling on the Predictability of Monsoon Intraseasonal Oscillations (MISO), *J. Atmos. Sci.*, 64, 157-174.
52. Li, J.-L., J. H. Jiang, **D. E. Waliser**, A. Tompkins, 2007: Assessing Consistency between EOS MLS and ECMWF Analyzed and Forecast Estimates of Cloud Ice, *Geophys. Res. Lett.*, 34, L08701, doi:10.1029/2006GL029022.
53. Tian, B., Y. L. Yung, **D. E. Waliser**, T. Tyranowski, L. Kuai, E. J. Fetzer, and F. W. Irion, 2007: Intraseasonal variations of the tropical total ozone and their connection to the MJO. *Geophys. Res. Lett.*, 34, L08704, 10.1029/2007GL029471.
54. **Waliser, D. E.**, K. Seo, S. Schubert, E. Njoku, 2007: Global Water Cycle Agreement in IPCC AR4 Model Simulations, *Geophys. Res. Lett.*, 34, L16705, doi:10.1029/2007GL030675.

## 2008

55. Seo, K., C. R. Wilson, J. Chen and **D. E. Waliser**, 2008: GRACE's spatial aliasing error, *Geophys. J. Int.*, 172, 41-48, doi: 10.1111/j.1365-246X.2007.03611.x.
56. Wu, D. L., J. H. Jiang, R. T. Austin, M. Deng, S. L. Durden, A. J. Heymsfield, B. H. Kahn, J.-L. Li, G. G. Mace, G. M. McFarquhar, C. J. Nankervis, H. C. Pumphrey, W. G. read, G. L. Stephens, S. Tanelli, D. G. Vane, **D. E. Waliser**, and J. W. Waters, 2008: Aura MLS cloud ice measurements and comparisons with CloudSat and other correlative data. *J. Geophys. Res.*, In Press.
57. Seo, K., C. R. Wilson, S.-C. Han and **D. E. Waliser**, 2008: Gravity Recovery and Climate Experiment (GRACE) alias error from ocean tides. *J. Geophys. Res.*, 113, B03405, doi:10.1029/2006JB004747.
58. Jiang, X., **D. E. Waliser**, M. C. Wheeler, C. Jones, M.-I. Lee, S. D. Schubert, 2008, Assessing the Skill of an All-Season Statistical Forecast Model for the Madden-Julian Oscillation, *Mon. Wea. Rev.*, 136, 1940-1956.

59. Tian, B. J., **D. E. Waliser**, R. A. Kahn, Q. B. Li, Y. L. Yung, T. Tyranowski, I. V. Geogdzhavetv, M. I. Mishchenko, O. Torres, and A. Smirnov, 2008: Does the Madden-Julian Oscillation influence aerosol variability?, *J. Geophys. Res.*, doi:10.1029/2007JD009372.
60. Schwartz, M. J., **D. E. Waliser**, B. Tian, J. F. Li, D. L. Wu, J. H. Jiang, and W. G. Read, 2008: MJO in EOS MLS cloud ice and water vapor. *Geophys. Res. Lett.*, 35, L08812, doi:10.1029/2008GL033675.
61. Vavrus, S., and **D. E. Waliser**, 2008: An improved parameterization for simulating Arctic cloud amount in the CCSM3 climate model. *J. Climate*. 21(21): 5673.
62. Jiang, X., and **D. E. Waliser**, 2008, Northward Propagation of the Subseasonal Variability over the Eastern Pacific Warm Pool, *Geophys. Res. Lett.*, doi:10.1029/2008GL033723.
63. Woods, C. P., **D. E. Waliser**, J.-L. Li, R. T. Austin, G. L. Stephens, D. G. Vane, 2008, Evaluating CloudSat Ice Water Content Retrievals Using a Cloud Resolving Model: Sensitivities to Frozen Particle Properties, *J. Geophys. Res. Special CloudSat Section*, 113, D00A11, doi:10.1029/2008JD009941.
64. Li, J.-F., **D. E. Waliser**, C. Woods, J. Teixeira, J. Bacmeister, J. Chern, B. W. Shen, A. Tompkins, and M. Kohler, 2008: Comparisons of Satellites Liquid Water Estimates with ECMWF and GMAO Analyses, 20th Century IPCC AR4 Climate Simulations, and GCM Simulations. *Geophys. Res. Lett.*, 35, L19710, doi:10.1029/2008GL035427.
65. Sperber, K.R., and **D. E. Waliser**, 2008: New Approaches to Understanding, Simulating, and Forecasting the Madden-Julian Oscillation, *Bull. Am. Meteor. Soc.*, DOI: 10.1175/2008BAMS2700.1.
66. Stephens, G.L., D. G. Vane, S. Tanelli, E. Im, S. Durden, M. Rokey, D. Reinke, P. Partain, G. G. Mace, R. Austin, T.S. L'Ecuyer, J. Haynes, M. Lebsock, K. Suzuki, **D. E. Waliser**, D. Wu, J. Kay, A. Gettleman, Z. Wang, and R. Marchand, 2008, CloudSat mission: Performance and early science after the first year of operation, *J. Geophys. Res.*, doi:10.1029/2008JD009982.
67. Sperber, K.R., J.M. Slingo, **D.E. Waliser**, P.M. Inness, 2008: Coarse-Resolution Models Only Partly Cloudy, *Science* 320 (5876), 612a, DOI: 10.1126/science.320.5876.612a. *Comment on paper by H. Miura, M. Satoh, T. Nasuno, A.T. Noda, and K. Oouchi, 2008: Madden-Julian Oscillation Event Realistically Simulated by a Global Cloud-Resolving Model, Science 318 (5857), 1763. [DOI: 10.1126/science.1148443].*
68. Fetzer, E. J., W. G. Read, **D. E. Waliser**, B. H. Kahn, B. Tian, H. Vomel, F. W. Irion, H. Su, A. Eldering, M. d. I. T. Juarez, J. H. Jiang, and V. Dang, 2008: Comparison of Upper Tropospheric Water Vapor Observations from the Microwave Limb Sounder and Atmospheric Infrared Sounder. *J. Geophys. Res.*, 113, D22110, doi:10.1029/2008JD010000.
69. Vavrus S., **D. E. Waliser**, A. Schweiger, J. Francis, 2008: Simulations of 20th and 21st century Arctic cloud amount in the global climate models assessed in the IPCC AR4, *Climate Dynamics*, DOI 10.1007/s00382-008-0475-6.

## 2009

70. **Waliser, D. E.**, J. F. Li, C. Woods, R. Austin, J. Bacmeister, J. Chern, A. Del Genio, J. Jiang, Z. Kuang, H. Meng, P. Minnis, S. Platnick, W.B. Rossow, G. Stephens, S. Sun-Mack, W.K. Tao, A. Tompkins, D. Vane, C. Walker, D. Wu, 2009: Cloud Ice: A Climate Model Challenge With Signs and Expectations of Progress, *J. Geophys. Res.- CloudSat Special Section*, 114, D00A21, doi:10.1029/2008JD010015.
71. Wu, D. L., R. T. Austin, M. Deng, S. L. Durden, A. J. Heymsfield, J.-L. Li, G. M. McFarquhar, I. V. Pittman, G. L. Stephens, S. Tanelli, D. G. Vane, **D. E. Waliser**, 2009, Comparisons of Global Cloud Ice from MLS, CloudSat, and Correlative Data Sets, *JGR Special CloudSat Section*, 114, D00A24, doi:10.1029/2008JD009946.
72. Tao, W.-K., J.-D. Chern, R. Atlas, D. Randall, M. Khairoutdinov, J.-L. Li, **D. E. Waliser**, A. Hou, X. Lin, C. Peters-Lidard, W. Lau, J. Jiang, and J. Simpson, 2009: A Multi-scale Modeling System: Developments, Applications and Critical Issues. *Bull. Amer. Meteor. Soc.* 90, 515-534.

73. Liu, P., Y. Kajikawa, B. Wang, A. Kitoh, T. Yasunari, T. Li, H. Annamalai, X. Fu, K. Kikuchi, R. Mizuta, K. Rajendran, **D. E. Waliser**, D. Kim, 2009: Tropical Intraseasonal Variability in the MRI-20km60L AGCM. *J. Climate*, 22, 2006–2022, doi: 10.1175/2008JCLI2406.1.
74. **CLIVAR Madden-Julian Oscillation Working Group**, 2009: MJO Simulation Diagnostics, *J. Clim.*, 22, DOI: 10.1175/2008JCLI2731.1.
75. Jiang, X., and **D. E. Waliser**, 2009: Two Dominant Subseasonal Variability Modes of the Eastern Pacific ITCZ, *Geoph. Res. Lett.*, 36, L04704, doi:10.1029/2008GL036820.
76. Jiang, X., **D. E. Waliser**, W. S. Olson, W.-K. Tao, T. S. L'Ecuyer, J.-L. Li, B. Tian, Y. L. Yung, A. M. Tompkins, S. E. Lang, and M. Grecu, 2009: Vertical Heating Structures Associated with the MJO as Characterized by TRMM Estimates, ECMWF Reanalyses and Forecasts: A Case Study during 1998-99 Winter, *J. Climate - TRMM heating special section*, 22, 6001-6022, doi:10.1175/2009JCLI3048.1.
77. Couhert, A., T. Schneider, J.-L. Li, **D. E. Waliser**, A.M. Tompkins, 2009: The maintenance of the relative humidity of the subtropical free troposphere, *J. Climate*, 23, 390–403.
78. **Waliser, D. E.**, B. J. Tian, M. J. Schwartz, X. Xie, W. T. Liu, and E. J. Fetzer, 2009: How well can satellite data characterize the water cycle of the Madden-Julian Oscillation? *Geophys. Res. Lett.*, 36, L21803, doi:10.1029/2009GL040005.
79. Seo, K.-W., **D. E. Waliser**, B. Tian, J. Famiglietti, and T. Syed, 2009: Evaluation of global land-to-ocean fresh water discharge and evapotranspiration using space-based observations. *J. Hydrol.*, **373**, 508-515, doi:10.1016/j.jhydrol.2009.05.014.
80. Kim, D., K. Sperber, W. Stern, **D. E. Waliser**, I.-S. Kang, E. Maloney, S. Schubert, W. Wang, K. Weickmann, J. Benedict, M. Khairoutdinov, M.-I. Lee, R. Neale, M. Suarez, K. Thayer-Calder, and G. Zhang. 2009: Application of MJO Simulation Diagnostics to Climate Models, *J. Climate*, 22(23): 6413.

## 2010

81. Gottschalck, J., M. Wheeler, K. Weickmann, F. Vitart, N. Savage, H. Lin, H. Hendon, **D. E. Waliser**, K. Sperber, M. Nakagawa, C. Prestrelo, M. Flatau, W. Higgins, 2010, Establishing and Assessing Operational Model MJO Forecasts: A Project of the CLIVAR Madden-Julian Oscillation Working Group, *Bull. Am. Meteor. Soc.*, 10.1175/2010BAMS2816.1.
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### **PROFESSIONAL SERVICE**

- Co-Chair, with P. Gleckler, World Meteorological Organization (WMO) World Climate Research Program (WCRP) Data Advisory Council (WDAC) obs4MIPs Task Team, 2014-present.
- Member, National Academy of Sciences study on Decadal Survey for Earth Science and Applications from Space, Weather and Air Quality: Minutes to Subseasonal, April 2016 to present.
- Member, National Academy of Sciences study on US Research Agenda for Subseasonal to Seasonal Prediction, August 2014 to March 2016.



- Member, National Integrated Drought Information System (NIDIS) Prediction Working Group, 2015-present.
- Lead Author, Climate Change Science Report, National Climate Assessment, USGCRP, March 2016-present.
- Chair, NASA obs4MIPs Science Working Group, 2011-2015.
- Member, World Climate Research Program (WCRP) / World Weather Research Program (WWRP) Subseasonal Planning Group, September 2011-Present.
- Co-Organized, with Marty Ralph (UCSD) and Jeanine Jones (CA DWR), Predictions During the 2015-16 El Nino Workshop, June 2106.
- International Organization Committee, Workshop on Intraseasonal Processes and Prediction in the Maritime Continent, Sponsored by World Climate Research Program (WCRP) and World Weather Research Program (WWRP), Singapore, April 2016.
- Co-Organizer, with Andrew Robertson, Frederic Vitart and Arun Kumar, AGU Session, Subseasonal to Seasonal Prediction of Weather and Climate, Fall AGU 2015, San Francisco, CA.
- Co-Organizer, with Andrew Robertson, Frederic Vitart and Arun Kumar, AGU Session, Sub-seasonal to Seasonal Forecasting of High-Impact Weather and Climate Events, AGU 2016, San Francisco, CA.
- Co-chair, with Mitch Moncrieff, World Meteorological Organization (WMO) joint World Climate Research Program (WCRP)/ World Weather Research Program (WWRP) – THORPEX Program Year of Tropical Convection Activity, 2006 – 2015.
- Co-Organizer, with Robert Ferraro, Peter Gleckler, Karl Taylor, Veronika Erying, obs4MIPs for CMIP6 Meeting, April 2014, NASA HQ.
- Member, CalWater 2 Science Steering Group, 2011-present.
- Member, World Climate Research Program (WCRP)/ World Weather Research Program (WWRP) – THORPEX Program, Madden Julian Oscillation (MJO) Task Force, November 2012 – 2014.
- Co-Organizer, with Marty Ralph and Daniel Rosenfeld, AGU Session, Precipitation, "From Too Little to Too Much: Emerging Understanding of Atmospheric Rivers and Calwater Aerosol-Cloud Interaction Studies, Fall AGU 2014, San Francisco, CA.
- Co-Organizer, with Mitch Moncrieff, AGU Session, Organized Convection Across Scales: Fundamentals and Phenomena, Fall AGU 2014, San Francisco, CA.
- Co-Organizer, with Mitch Moncrieff, AGU Session, Multi-scale Organization of Tropical Convection: Modeling Activities Utilizing YOTC and DYNAMO/CINDY, Fall AGU 2013, San Francisco, CA.
- Member, WMO THORPEX International Core Steering Committee (ICSC), 2009 – 2012.
- Member, Science Steering Committee, Center For Prototype Climate Modeling, New York University Abu Dhabi Institute, 2012-2013.
- Co-Organizer, with Chidong Zhang, Symposium on Prediction of the Madden-Julian Oscillation, 2013, AMS Annual Meeting, Austin, TX.
- Co-Organizer, with Mitch Moncrieff, AGU Session, Multi-scale Organization of Tropical Convection: YOTC and the Virtual Global Field Campaign Approach, Fall AGU 2012, San Francisco, CA.
- Co-Organizer, with Mitch Moncrieff, AGU Session, Multi-scale Organization of Tropical Convection: YOTC, Fall AGU 2011, San Francisco, CA.
- Co-Organizer, with M. Moncrieff and James Caughey, 1<sup>st</sup> YOTC Science Symposium, Sponsors: WCRP-WWRP/ THORPEX, May 2011, Chinese Meteorological Agency, Beijing, China.
- Co-Organizer, with J. Hyon, D. Crichton and P. Webster, NASA Technical Data System Workshop for Planning the IPCC, November 9-10, 2010, GSFC/NASA, Greenbelt, MD.
- Co-Organizer, with P. Gleckler, J. Teixeira and R. Ferraro, Joint NASA/JPL-DOE/PCMDI Workshop, Better use of satellite data in evaluating climate models contributing to CMIP and assessed by IPCC, October 12-13, 2010, LLNL, Livermore, CA
- Co-Organizer, with Mitch Moncrieff, AGU Session, Multi-scale Organization of Tropical Convection: YOTC, Fall AGU 2010, San Francisco, CA.

- Co-Organizer, with G. Potter, J. Teixeira and A. Braverman, AGU Session, The Use of Observations For Evaluating CMIP5/IPCC Simulations, Fall AGU 2010, San Francisco, CA.
- Member, GEOS-5 Collaboration Group, Telecons & Meetings, 2009-2014.
- Co-chair, with Matthew Wheeler, World Climate Research Program (WCRP) / World Weather Research Program (WWRP) – THORPEX Program, Madden Julian Oscillation (MJO) Task Force, November 2009 – 2011.
- Co-Organizer, with Mitch Moncrieff, AGU Session, Year of Tropical Convection (YOTC): Status and Research Agenda, Western Pacific AGU 2010, Taipai, Taiwan.
- Co-Organizer, with H. Hendon, K. Sperber and M. Wheeler, Modeling Monsoon Intraseasonal Variability: From Theory to Operational Forecasting Workshop, Sponsors: WCRP-WWRP/THORPEX, CLIVAR AAMP: June 2010, APEC Climate Center, Busan, Republic of Korea
- Member, National Research Council, National Academy of Sciences study on Intraseasonal and Interannual Climate Predictability, January 2009 to September 2010.
- Co-chair, with E. Maloney, NSF Science and Technology Center, Center for Multi-Scale Modeling and Atmospheric Processes (CMMAP) Madden Julian Oscillation (MJO) Working Group. January 2008 to 2011.
- Member, CALIPSO/CloudSat Science Team, 2008 to 2011.
- Member, International Committee, 4<sup>th</sup> WMO International Workshop on Monsoons, 20-15 October 2008, Beijing, China.
- Co-Organizer, with M. Moncrieff, AGU Session, Year of Tropical Convection (YOTC): Status and Research Agenda, Summer AGU 2010, Iguazu, Brazil.
- Co-Organizer, with M. Moncrieff, AGU Session, Year of Tropical Convection (YOTC): Status and Research Agenda, Fall AGU 2009, San Francisco, CA.
- Co-Organizer, with M. Moncrieff and D. Neelin, AGU Session, Tropical Convection: Observations, Theory, High-Resolution Modeling, and Parameterization, Spring AGU 2008, Toronto, Canada.
- Co-Organizer, with M. Moncrieff, AMS Session, Co-Organizer, Year of Tropical Convection (YOTC), January 2009, Phoenix, AZ.
- Co-Organizer, with M. Moncrieff, AGU Session, Year of Tropical Convection ( YOTC ): High-Resolution Modeling, in Situ Data, and State-of-the-Art Satellite Observations to Address the Challenge of Multiscale Organized Convection, Fall AGU 2008, San Francisco, CA.
- Co-Chair, with M. Moncrieff and J. Caughey, World Meteorological Organization (WMO)/THORPEX – World Climate Research Program (WCRP) Implementation Planning Meeting for the “Year of Tropical Convection (YOTC)” Activity. Honolulu, HI, July 13-15, 2009.
- Co-Chair, with M. Moncrieff and J. Caughey, World Meteorological Organization (WMO)/THORPEX – World Climate Research Program (WCRP) Scientific Planning Meeting for the “Year of Tropical Convection (YOTC)” Activity. Arlington, VA, November 13-14, 2007.
- Co-Chair, with Ken Sperber, US CLIVAR New Approaches to Understanding, Simulating, and Forecasting the Madden-Julian Oscillation, Irvine, CA, November 5-7, 2007.
- Co-Organizer, with E. Njoku, E. Wood, J. Famiglietti, Joint JPL-UCI international Satellite Observations of the Global Water Cycle Workshop ([hydro.jpl.nasa.gov/sogwc.html](http://hydro.jpl.nasa.gov/sogwc.html)), Irvine, CA, March 2007.
- Co-Chair, with K. Sperber, US CLIVAR Madden-Julian Oscillation Working Group ([www.usclivar.org](http://www.usclivar.org)), 2006 – 2009.
- Member of the Scientific Steering Group of the World Climate Research Program’s (WCRP; [wcrp.wmo.int](http://wcrp.wmo.int)) Climate Variability and Predictability (CLIVAR; [www.clivar.org](http://www.clivar.org)) Program, 2005 – 2009.
- Member, International Committee, 3<sup>rd</sup> WMO International Workshop on Monsoons, 2-6 November 2004, Hangzhou, China
- Co-Organizer, AGU Session, Diagnosing, Modeling, and Forecasting Subseasonal Atmospheric Variability, Spring 2006, Baltimore, MD.
- Co-Organizer, Intraseasonal Variability Session in the 14th Conference on Interaction of the Sea and Atmosphere, January 2006, Atlanta, GA.

- Co-Organizer, AGU Session, Modeling, Simulating, and Forecasting Subseasonal Atmospheric Variability, Spring 2006, New Orleans, LA.
- Interim co-chair, US CLIVAR Indian Sector Panel, December 2004 – 2005.
- Co-Chair, with S. Schubert, A. Kumar, K. Weickmann, and R. Dole, US CLIVAR/NASA sponsored meeting June 4-5, 2003 at University of Maryland on Modeling, Simulation and Forecasting of Subseasonal Variability.
- Co-Chair, with S. Schubert, A. Kumar, K. Weickmann, and R. Dole, effort to develop a multi-institute/multi-national Experimental MJO Prediction Program to be administered via CDC/NOAA, 2002-04.
- Co-Chair, with S. Schubert, R. Dole, M. Suarez, H. van den Dool, NASA-sponsored workshop on “Prospects for Improved Forecasts of Weather and Short-Term Climate Variability on Subseasonal Time Scales”. April 16-18, 2002, Greenbelt, MD.
- Developer/Investigator of Long Island Sound Ferry-Based Marine and Atmospheric Observing System ([www.stonybrook.edu/soundscience](http://www.stonybrook.edu/soundscience)), 2002-04.
- Member, US CLIVAR Asian-Australian Monsoon Working Group, 2001-2004.
- Participant, CLIVAR Monsoon Study on GCM Asian-Australian Monsoon Intercomparison, 2001-2003.
- Member, NCAR Coupled System Modeling Atmospheric Model Working Group, 1999-2003.
- Member, NASA Data Analysis and Archive Center (DAAC) Working Group, Fall 1994 to Fall 1997.
- Member, Sequoia 2000 Visiting Software Assessment Team (SWAT), Fall 1992 to Spring 1993.

### **MEDIA AND PUBLIC OUTREACH ACTIVITIES**

- Coastlines – New York Sea Grant Outreach Magazine, Spring 2002, “Improving the Health and Balance of New York’s Waters”. Article on the SoundScience, Long Island Sound Ferry Observation Program.
- Happenings – SUNY Newspaper, September 10, 2003, “SBU and Ferry Team Up to Solve Lobster Mystery”, Article on the SoundScience, Long Island Sound Ferry Observation Program.
- Village Times Herald – Long Island Newspaper, October 2, 2003, “Secrets of the sea surface with every ferry trip”, Article on the SoundScience, Long Island Sound Ferry Observation Program and Public Inauguration.
- Newsday – Long Island Newspaper, October 12, 2003, “Double Duty Across the Sound”, Article on the SoundScience, Long Island Sound Ferry Observation Program and Public Inauguration.
- Coastlines – New York Sea Grant Outreach Magazine, Fall 2003, “Board the Barnum”. Article on the SoundScience, Long Island Sound Ferry Observation Program.
- AGU, Press Release, December 8, 2005, “Aura Satellite Tracks Earth’s Air Quality, Global Cloud Ice”, Article on Aura/EOS science, including study on MLS cloud ice and climate model fidelity, Li et al. 2005.
- BBC NEWS ([bbc.co.uk](http://bbc.co.uk)), December 9, 2005, “Europe’s pollution hotspots shown”, Article on Aura/EOS science, including study on MLS cloud ice and climate model fidelity, Li et al. 2005.
- NASA News Feature, December 8, 2005, “NASA Satellite Eyes Atmosphere to improve Pollution and Climate”. Article on Aura/EOS science, including study on MLS cloud ice and climate model fidelity, Li et al. 2005.
- JPL News Release, February 2, 2006, “Scientists Surf the Seas of Space to Catch an Atmospheric Wave”. Article on Madden-Julian Oscillation study using AIRS data. Tian et al. 2006.
- Reuters, Video News Story release June 20, 2007, California Climate and Water Availability.
- Eaton Canyon Nature Center Twilight Programs, Removing the Mystery of Predicting Climate Change, September 29, 2007.
- von Karman Lecture, JPL / Pasadena Community College, Removing the Mystery of Predicting Climate Change, October 18, & 19, 2007.
- Altadena Rotary Club, An Introduction to Global Warming: What might we expect in California? November 1, 2007.
- Jefferson Middle School GATE Class, An Introduction to Climate Change, JPL, November 8, 2007.
- California State Legislator Tour, Discussions on Climate and Climate Change, JPL, November 23, 2007.

AGU, Press Release, December 11, 2007, “New Frontiers in Predicting Precipitation”, Reported on activities of US CLIVAR Madden-Julian Oscillation Working Group.

Reuters, News Story release December 12, 2007, Scientists gain better view on how weather forms.

Leader, San Gabriel / Pasadena Area Roots and Shoots Group, 6-10 Year Olds, see [www.janegoodall.org](http://www.janegoodall.org) and [www.rootsandshootsprotecttheearth.org](http://www.rootsandshootsprotecttheearth.org), August 2007 – present.

California State University, Northridge, Planetarium Show/Lecture, Removing the Mystery of Predicting Climate Change, March 7, 2008.

Lecture, 3 Science Classes, Showed and Discussed JPL DVD, 3<sup>rd</sup> Grade Torrey Pines Elementary School, April 2008.

Statement, Signing of University and College Sustainability Agreement, Pasadena City College, January 2009.

JPL Public Symposium on Climate Change, JPL Green Club, “How good are models at Predicting Climate Change?”, October, 24, 2009.

Connecting with Climate Change Symposium for Educators, Educator Institute on Climate Change, “Climate Models and their Predictions of Climate Change”, JPL, Pasadena, February 26-27, 2011.

Press Release News Coverage: “Ecological sensitivity: a biospheric view of climate change”, The Blue Dot Report, NPR for Northern California, December 29, 2011.

Press Release News Coverage: “Ecological sensitivity: a biospheric view of climate change”, Alan Stahler KVMR-FM, Nevada City, CA, January 3, 2012.

Press Release News Coverage: “Ecological sensitivity: a biospheric view of climate change”, Canadian Broadcasting Corporation TV News, January 11, 2012.

Western Growers and Shippers Newsletter Article, Irrigation Technology: New data and advancements designed to improve efficiency, May 2013.

Press Release and News Coverage: “NASA identifies rare weather pattern that will help predict California’s big winter storms”, November 2013. Sacramento Bee, CA and numerous others.

California Department of Water Resources, Experimental Winter Outlook, Contribution provided : “The Madden-Julian Oscillation & Atmospheric Rivers: Key Phenomena for Predicting Weather & Water”, San Diego, CA. Follow up radio interview with KCBS.COM, December 2013.

Popular Science Online, “IPCC Still Really, Really Sure We’re Causing Climate Change”, interview comments/questions regarding climate change, September 2013.

Sierra Storm – invited speaker. 2-Day summit meeting with broadcast meteorologists. Presentation on “The Madden-Julian Oscillation & Atmospheric Rivers: Key Phenomena for Predicting Weather & Water”, Lake Tahoe, CA, January 2014.

Sierra Storm Live Television Interviews: Weather Channel, National, KVTQ – Billings, Fox5 – San Diego, KTVN – Reno, KSBW – Monterey, KRNW – Reno, KEYT – Santa Barbara, January 2014.

Sierra Storm Print Coverage: [mynews4.com](http://mynews4.com), [southtahoe.com](http://southtahoe.com), [carsonnow.org](http://carsonnow.org), [recordcourier.com](http://recordcourier.com), [laketahoenews.net](http://laketahoenews.net), [kontaktor.com](http://kontaktor.com), January 2014.

Business Insider article on “There Was A 115-Degree Temperature Difference Between Two US Cities On Thursday”; interview comments/questions regarding climate change and weather extremes, January 2014.

Orange County Register “94 percent of Californians agree: The drought is serious. Now what do we do about it?”; interview comments/questions, February 2015.

AGU Press Conference, “Atmospheric Rivers”, Global impacts of the 2015 – 2016 El Niño, 2015, AGU, San Francisco, CA.

von Karman Lecture, JPL & Pasadena Community College, 2015-2016 El Niño Winter and California Water: What did we see from space? (Joint with T. Painter, T. Farr and J. Famiglietti), June 16 & 17, 2016.

### **INVITED PRESENTATIONS**

"The Preferred Latitudes of the Intertropical Convergence Zone", Dept. of Atmospheric Sciences, University of California, Los Angeles, CA, January 1992.

- "The Preferred Latitudes of the Intertropical Convergence Zone", Dept. of Physical Oceanography, Jet Propulsion Laboratory, Pasadena, CA, January 1992.
- "Convective Cloud Systems and High SSTs: Coupled Interactions and Self-Regulation", Pacific Marine Environmental Laboratory, Seattle, WA, April 1992.
- "Shortwave Feedbacks and ENSO: Forced Ocean and Coupled Ocean-Atmosphere Modeling Experiments", Oceanography Department, Lamont-Doherty Geological Laboratory, Palisades, NY, April 1994.
- "Four-Dimensional Ocean and Atmosphere Conditions Associated with Ocean Hot Spots", New England Physical Oceanography meeting, Woods Hole Oceanographic Institute, Woods Hole, MA, October 1994.
- "Formation and Limiting Mechanism for Very High SST: Linking the Dynamics and Thermodynamics", Climate Dynamics Branch, Goddard Space Flight Center, NASA, Greenbelt, MD, April 1995.
- "Shortwave Feedbacks and ENSO: Forced Ocean and Coupled Ocean-Atmosphere Modeling Experiments", Graduate School of Oceanography, URI, Narragansett, RI, May 1995.
- "Formation and Limiting Mechanism for Very High SST: Linking the Dynamics and Thermodynamics", Scripps Institution of Oceanography, La Jolla, CA, May 1995.
- "Climate Controls on High Sea Surface Temperature", Columbia University, NASA - Goddard Institute of Space Studies, New York, NY, April 1996.
- "Removing Satellite Equatorial Crossing Time Biases from the OLR and HRC Data Sets", NESDIS/NOAA, Camp Springs, MD., March, 1997.
- "The Influence of Coupled Sea Surface Temperatures on the Madden Julian Oscillation: A Model Perturbation Experiment ", Scripps Institution of Ocean., La Jolla, CA, April 1997.
- "The Influence of Coupled Sea Surface Temperatures on the Madden Julian Oscillation: A Model Perturbation Experiment ", Geophysical Fluid Dynamics Lab., Princeton, NJ, May 1997.
- "The Influence of Coupled Sea Surface Temperatures on the Madden Julian Oscillation: A Model Perturbation Experiment", National Center for Atmospheric Research, Boulder, CO, June 1997.
- "The Madden-Julian Oscillation: Simulation, Prediction and Sea Surface Temperature Coupling", Climate and Radiation Branch, GSFC/NASA, Greenbelt, MD, February 1998.
- "The Madden-Julian Oscillation: Simulation, Prediction and Sea Surface Temperature Coupling", Naval Research Laboratory, Monterey, CA, June 1998.
- "The Madden-Julian Oscillation: Simulation, Prediction and Sea Surface Temperature Coupling", Center for Ocean, Land and Atmosphere (COLA), Calverton, MD, November 1998.
- "The Madden-Julian Oscillation: Simulation, Prediction and Sea Surface Temperature Coupling", International Research Institute, University of California, La Jolla, CA, December 1998..
- "The Madden-Julian Oscillation: Simulation, Prediction and Sea Surface Temperature Coupling", Graduate School of Oceanography, URI, Narragansett, RI, February 1999.
- "Interannual Sea Surface Temperature Variability and the Predictability of Tropical Intraseasonal Variability", CLIVAR Monsoon Conference, Honolulu, HI, December 1999.
- "Madden-Julian Oscillation Reviews: Ocean-Atmosphere Interaction and the MJO", MJO/ENSO Workshop, GFDL, Princeton, NJ, March 2000.
- "Madden-Julian Oscillation (MJO) Prediction and Predictability", Department of Meteorology, University of Maryland, College Park, MD, April 2000.
- "Intraseasonal Oscillation in the NSIPP GCMs", NASA Seasonal to Interannual Prediction Program (NSIPP) Science Team Meeting, Greenbelt, MD, July 11-12. 2000.
- "Predictability Limits for the Intraseasonal Oscillation: Implications for Monsoon Prediction US- Japan Workshop On Monsoon Systems, NASA/GSFC, Greenbelt, MD, November 28-30, 2000.
- "Simulation and Predictability of the Madden-Julian Oscillation in the Coupled Ocean-Atmosphere System", Courant Institute of Mathematical Studies, NYU, New York, NY, May 2001.
- "Predictability Associated with the Madden-Julian Oscillation Interannual Activity & Individual Events", Geophysical Fluid Dynamics Lab., Princeton, NJ, May 2001.
- "Intraseasonal Predictability Interannual Activity & Individual Events", USCLIVAR Asian-Australian Monsoon Working Group Meeting, Washington DC, May 2001.

- “Predictability Limits for the Intraseasonal Oscillation: Implications for Monsoon”, International CLIVAR Monsoon Panel Meeting, Reading University, UK, August 2001.
- “Predictability Associated with the Madden-Julian Oscillation Interannual Activity & Individual Events”, Max Planck Institute, Hamburg, Germany, September 2001.
- “Intraseasonal Predictability: Implications for monsoon and weather prediction”, United States CLIVAR Scientific Steering Committee Meeting, GFDL/Princeton Univ., December 2001.
- “Predictability Associated with the Madden-Julian Oscillation Interannual Activity & Individual Events”, Lamont Doherty Earth Observatory, Columbia University, Palisades NY, March 2002.
- “Predictability and Forecast Issues Associated with the MJO/ISO”, NASA-sponsored Workshop on Prospects for Improved Forecasts of Weather and Short-Term Climate Variability on Sub-seasonal Time Scales, Greenbelt MD, April 2002.
- “Predictability and Forecast Issues Associated with the Madden-Julian Oscillation”, Research Prediction Initiative (RPI) sponsored workshop on Weather Extremes And Atmospheric Oscillations, Hamilton, Bermuda, 1-2 October 2002.
- “Indo-Pacific Ocean Response to the Madden-Julian Oscillation”, Graduate School of Oceanography, URI, Narragansett, RI, November 2002.
- “Simulating and Predicting Tropical Intraseasonal Variability”, Center for Ocean, Land and Atmosphere (COLA), Calverton, MD, April 2003.
- “Modeling and Predicting the Madden-Julian Oscillation: Building a Bridge Between Weather and Climate”, Jet Propulsion Laboratory, Pasadena, CA, October 2003.
- “Coupled Ocean-Atmosphere Interactions and the Madden-Julian Oscillation: Implications for the Prediction of Extended-Range Weather and Short-Term Climate Variations”, California Institute of Technology, Pasadena, CA, October 2003.
- “Coupled Ocean-Atmosphere Interactions and the Madden-Julian Oscillation: Implications for the Prediction of Extended-Range Weather and Short-Term Climate Variations”, Climate Dynamics Branch, Goddard Space Flight Center, NASA, Greenbelt, MD, November 2003.
- “Sensitivity of MJO Predictability and Prediction to GCM and Ocean-Atmosphere Coupling”, International Asian Monsoon Symposium, Honolulu, HI, 18–20 February 2004.
- “Modeling and Predicting the Madden-Julian Oscillation: Building a Bridge Between Weather and Climate”, California Institute of Technology, Pasadena, CA, March 2004.
- “Intraseasonal Variations: Scientific Topics Issue”, WMO 3<sup>rd</sup> International Monsoon Workshop, Hangzhou, China, November 2004.
- “Madden-Julian Oscillation Predictability Sensitivity to Season, SST conditions, and GCM and Other Issues”, International Tropical Climate and Weather Symposium, Guangzhou, China, November 2004.
- “Monsoon Science: A Report of the WMO 3rd Workshop on Monsoons”, California Institute of Technology, Pasadena, CA, February 2005.
- “Are Physical and Biological Ocean Impacts From the MJO Important?”, JPL Ocean Group Seminar, Pasadena, CA, March 2005.
- “Modeling and Predicting the Madden-Julian Oscillation”, Department of Earth System Science, University of California, Irvine, June 1, 2005.
- “Modeling and Forecasting Issues Associated with Intraseasonal Monsoon Variations”, Pan GEWEX CLIVAR Monsoon Meeting, June 15-17, 2005.
- “Model representation of cloud process & the hydrological cycle”, Center for Hydrometeorology and Remote Sensing, University of California, Irvine, September 21, 2005.
- “Modeling and Forecasting Issues Associated with Intraseasonal Monsoon Variations”, Department of Atmospheric and Ocean Sciences, University of California, Los Angeles, February 22, 2006.
- “Predictability and Forecast Issues Associated with the Madden-Julian Oscillation”, WCRP/THORPEX Workshop on the Organization and Maintenance of Tropical Convection and the Madden-Julian Oscillation, Trieste, Italy, 13-17 March, 2006.

- “Year of coordinated Observing, modeling and Forecasting: Addressing the Challenge of Organized Tropical Convection”, Tropical Convection & The Weather Climate Interface Retreat , NCAR, Boulder, CO, 10 - 14 July 2006.
- “New Satellite Resources for Characterizing and Guiding Model Representations of Tropical Convection”, Tropical Convection & The Weather Climate Interface Retreat , NCAR, Boulder, CO, 10 - 14 July 2006.
- “Year of coordinated Observing, modeling and Forecasting: Addressing the Challenge of Organized Tropical Convection”, WCRP Working Group on Numerical Experimentation (WGNE) , NCAR, Boulder, CO, 23-27 October 2006.
- “Using Microwave Limb Sounder (MLS) Data to Evaluate Model Cloud Ice Fields”, Workshop on Parametrization of Clouds in Large-scale Models, ECMWF, Reading, UK, November 13-15 2006.
- “Year of coordinated Observing, modeling and Forecasting: Addressing the Challenge of Organized Tropical Convection”, WCRP GEWEX SSG Meeting, Honolulu, HI, 22-26 January 2007.
- “US CLIVAR MJO Working Group: MJO Simulation Metrics”, WGNE Systematic Errors Workshop, San Francisco, CA, 12-16 February 2007.
- “From Cloud-Ice to the MJO: Studies and Plans for Addressing the Tropical Convection Problem”, NSF Science and Technology Center for Multi-Scale Modeling and Atmospheric Processes (CMMAP), Kuai, HI, 19-20 February 2007.
- “Year of coordinated Observing, modeling and Forecasting: Addressing the Challenge of Organized Tropical Convection”, WCRP CLIVAR Monsoon Panel Meeting, Honolulu, HI, 21-22 February 2007.
- “Year of coordinated Observing, modeling and Forecasting: Addressing the Challenge of Organized Tropical Convection”, National Academy of Sciences (NAS), Climate Research Committee (CRC), Washington, DC, May 17, 2007.
- “Exploring the Biological and Chemical Reach of the MJO: Chl, O<sub>3</sub> & Aerosols”, NCEP/NOAA, Camp Springs, MD, July 12, 2007.
- “Exploring the Biological and Chemical Reach of the MJO: Chl, O<sub>3</sub> & Aerosols”, Goddard Space Flight Center, NASA, Greenbelt, MD, July 13, 2007.
- “Year of coordinated Observing, modeling and Forecasting: Addressing the Challenge of Organized Tropical Convection”, International CLIVAR Scientific Steering Group Meeting, WMO, Geneva, Switzerland, October 2007.
- “Exploring the Biological and Chemical Reach of the MJO: Chl, O<sub>3</sub> & Aerosols”, State University of New York, Marine and Atmospheric Sciences, Stony Brook, NY, November, 2007.
- “US CLIVAR MJO Working Group: Efforts to Establish and Improve Subseasonal Predictions”, Fall AGU, San Francisco, CA, December 11, 2007.
- “Intraseasonal Variability and Predictability: An Overview of the Madden-Julian Oscillation”, Advanced Institute for Asian-Australian Monsoon System, U. of Hawaii, January 7, 2008
- “Cloud Ice”, Goddard Modeling and Assimilation Office, GSFC, Greenbelt, MD, February 2008.
- “Year of Tropical Convection (YOTC): A WCRP/WWRP/THORPEX Activity Addressing the Challenge of Organized Convection”, WWRP JSC, Geneva, Switzerland, July, 2008.
- “US CLIVAR MJO Working Group: Efforts to Establish and Improve MJO Predictions”, Intraseasonal Monsoon Variations and Prediction Workshop, International Centre for Theoretical Physics, Trieste, Italy, August, 2008.
- “Anthropogenic Climate Changes in California: Hydroclimate, Snowpack, and Santa Ana Winds”, Fifth Annual Climate Change Research Conference, Sacramento, CA, September 2008.
- “US CLIVAR MJO Working Group: Efforts to Establish and Improve MJO Predictions”, National Taiwan University, Tapei, Taiwan, October, 2008.
- “Exploring the Biological and Chemical Reach of the MJO : Chl, O<sub>3</sub> & Aerosols”, Academia Sinica, Tapei, Taiwan, October, 2008.
- “Cloud Ice: A Climate Model Challenge With Signs & Expectations of Progress”, National Central University, Tapei, Taiwan, October, 2008.

- “Year of Tropical Convection (YOTC): A WCRP/WWRP/THORPEX Activity Addressing the Challenge of Organized Convection”, Central Weather Bureau, Taipei, Taiwan, October, 2008.
- “US CLIVAR MJO Working Group: Efforts to Establish and Improve MJO Predictions”, CLIVAR Asian-Australian Monsoon Panel Meeting, Beijing, China, October, 2008.
- “Some Considerations of Multi-Scale Interactions in the Tropics”, Pan-WCRP Monsoon Cross-Cut Meeting, Beijing, China, October, 2008.
- “Year of Tropical Convection (YOTC): A WCRP/WWRP/THORPEX Activity Addressing the Challenge of Organized Convection”, 4<sup>th</sup> WMO International Monsoon Workshop, Beijing, China, October, 2008.
- “Year of Tropical Convection (YOTC): A WCRP/WWRP/THORPEX Activity Addressing the Challenge of Organized Convection”, 3<sup>rd</sup> International Workshop on High Resolution Modeling, Honolulu, HI, December 2008.
- “Year of Tropical Convection (YOTC): A Joint WWRP and WCRP Activity to Address the Challenges of Multi-Scale Organized Convection”, Fall AGU, San Francisco, CA, December 2008.
- “MJO-Related Variability over the Indian Ocean: Ocean Responses and AGCM/AOGCM Simulation Fidelity”, Fall AGU, San Francisco, CA, December 2008.
- “Mean and Variability of Vertical Structure of Cloud Liquid and Ice Water: Observations from CloudSat and Comparisons with GCMs”, Fall AGU, San Francisco, CA, December 2008.
- “US CLIVAR MJO Working Group: Efforts to Establish and Improve MJO Predictions”, CMAP Science Team Meeting, New York, NY, January 2009.
- “US CLIVAR MJO Working Group : Efforts to Establish and Improve MJO Predictions” +  
 “Exploring the Biological and Chemical Reach of the MJO : Chl, O<sub>3</sub> & Aerosols” +  
 “Cloud Ice : A Climate Model Challenge With Signs & Expectations of Progress” +
- “Year of Tropical Convection (YOTC): A WCRP/WWRP/THORPEX Activity Addressing the Challenge of Organized Convection”, Indian Institute of Tropical Meteorology, Pune, February 2009.
- “US CLIVAR MJO Working Group: Efforts to Establish and Improve MJO Predictions”, Indian Meteorology Department, New Delhi, February 2009.
- “Year of Tropical Convection (YOTC): A WCRP/WWRP/THORPEX Activity Addressing the Challenge of Organized Convection”, National Center for Medium Range Weather Forecasts, New Delhi, February 2009.
- “Motivation for Intraseasonal Prediction”, Intraseasonal to Interannual Predictability Workshop, NOAA, Silver Springs, MD, February 2009.
- “US CLIVAR MJO Working Group: Efforts to Establish and Improve MJO Predictions”, Scripps Institution of Oceanography, La Jolla, CA, March 2009.
- “Cloud Ice: A Climate Model Challenge With Signs & Expectations of Progress”, Dept. Atmospheric Sciences, Colorado State University, April, 2009.
- “Vertical Structure And Processes Revealed With Recent Satellite Data”, Multi-scale processes in the tropics, Banff Conference Series, Banff International Research Station, Canada, April 2009.
- “US CLIVAR MJO Working Group and Year of Tropical Convection: Progress and Plans”, WCRP-CLIVAR Scientific Steering Group Meeting, Madrid, Spain, May 2009.
- “US CLIVAR MJO Working Group and Year of Tropical Convection: Progress and Plans”, WCRP-VAMOS Science Panel Meeting, San Juan, Puerto Rico, June 2009.
- “Atmospheric River: Modeling and Observation Studies, CALWATER Science Planning Meeting, Scripps Institution of Oceanography, La Jolla, CA, June 2009.
- “Year of Tropical Convection (YOTC): Updates and Implementation Plans”, Implementation Planning Meeting, Honolulu, HI, July 2009.
- “Cloud Ice: A Climate Model Challenge With Signs & Expectations of Progress”, Program for Climate Model Diagnostics and Comparisons (PCMDI), Lawrence Livermore National Laboratory, September 2009.
- “Diagnostics for the Tropics: Some (Cautious) Uses of Satellite Data”, ECMWF Seminar Series, ECMWF, Reading, UK, September 2009.



- “US CLIVAR MJO Working Group, WMO Task Force and Year of Tropical Convection: Progress and Plans”, WMO Working Group on Climate Modeling (WGCM), Annual Meeting, San Francisco, CA, September 2009.
- “Decadal Climate Prediction and the IPCC”, NASA’s California Water Resources Workshop, Pasadena, CA, October 2009.
- “Cloud-Ice: Modeling and Observing The Hard Part of the Clouds”, ESE Seminar Series, Caltech, Pasadena, CA, October 2009.
- “Year of Tropical Convection”, World Meteorological Organization, 15<sup>th</sup> Session, Commission on Atmospheric Sciences, Incheon Korea, November 2009.
- “Year of Tropical Convection”, World Meteorological Organization, 15<sup>th</sup> Session, Commission on Atmospheric Sciences (CAS), Pre-CAS Science, Incheon Korea, November 2009.
- “Year of Tropical Convection (YOTC): Status and Research Agenda”, Fall AGU, San Francisco, CA, December 2009.
- “SP-CAM Subgrid-scale / CRM Variability in the MJO and MJO Task Force”, CMMAP Science Team Meeting, La Jolla, CA, January 2010.
- “Observations for CMIP5 Simulations”, Workshop on Ensuring Access and Trustworthiness of Climate Observations and Models for Society, NCDC, Asheville, NC, March 2010.
- “The Impact of Precipitating Ice and Snow on the Radiation Balance in Global Climate Models “, GEOS-5 Science Working Group, GSFC/NASA, Greenbelt, MD, April 2010.
- “Cloud-Ice: Modeling and Observing The Hard Part of the Clouds”, Dept. Atmospheric Science, University of Washington, Seattle, April 2010.
- “WMO MJO Task Force and Year of Tropical Convection (YOTC): Progress and Plans”, Pan GEWEX Meeting, Seattle, WA, August 2010.
- “WMO MJO Task Force and Year of Tropical Convection (YOTC): Progress and Plans”, WMO Working Group on Climate Modeling (WGCM), Annual Meeting, Exeter, UK, September 2010.
- “Facilitating the use of Satellite Observations for Evaluating CMIP5/IPCC Simulations”, NASA Technical Data System Workshop for Planning the IPCC, PCMDI, LLNL, Livermore, CA, October, 2010.
- “The Impact of Precipitating Ice and Snow on the Radiation Balance in Global Climate Models “, International Symposium on the A-Train Constellation, New Orleans, LA, October, 2010.
- “CMIP, NASA Satellite Data & Climate Model Evaluation in the IPCC”, NASA Technical Data System Workshop for Planning the IPCC, Goddard Space Flight Center/NASA, Greenbelt, MD, November, 2010.
- “MJO Task Force and Diabatic Heating Model Intercomparison Proposal”, CMMAP Science Team Meeting, Berkeley, CA, January 2011.
- “The MJO: Some Updates on Science, Forecasting and Impacts”, Seminar, Goddard Space Flight Center/NASA, Greenbelt, MD, February 2011.
- “How Good are models at predicting Climate Change?”, Connecting with Climate Change, Sally Ride Educator Institute, JPL/NASA, Pasadena, CA, February, 2011.
- “The MJO: Some Updates on Science, Forecasting and Impacts”, Seminar, Atmosphere Ocean Research Institute, University of Tokyo, Chiba, Japan, March 2011.
- “Regional Climate Model Evaluation System”, CORDEX-Africa Workshop, International Center for Theoretical Physics, Trieste, Italy, March, 2011.
- “The MJO: Some Updates on Science, Forecasting and Impacts”, Seminar, JAMSTEC, Yokohama Institute, Yokohama City, Japan, March 2011.
- “Facilitating the use of Satellite Observations for Evaluating CMIP5/IPCC Simulations”, 3<sup>rd</sup> International Workshop on Global Change Projection: Modeling, Intercomparison, and Impact Assessment, Tsukuba, Japan, March 2011.
- “The MJO: Some Updates on Science, Forecasting and Impacts”, Seminar, GFDL, Princeton, NJ, April 2011.
- “Year Of Tropical Convection (YOTC): Motivation, Synoptic Review, Status And Plans, Seminar, Royal Meteorological Society of London Meeting, April 2011.

- “Climate variability and weather highlights during the “Year”, 1<sup>st</sup> YOTC Science Symposium, Chinese Meteorological Administration, Beijing, May 2011.
- “The MJO: Some Updates on Science, Forecasting and Impacts”, Seminar, Geological and Planetary Sciences Division, Caltech, July 2011.
- “Climate Model Diagnostics and Evaluation”, 1<sup>st</sup> JPL Center for Climate Sciences Summer School, Caltech, August 2011.
- “Satellite observations for CMIP5/IPCC Model Evaluation”, Brown Bag Seminar Series, NASA Headquarters, Washington DC, August 2011.
- “YOTC and MJO Task Force Status and Plans”, International Core Steering Committee for THORPEX (ICSC-9), Geneva, September 2011.
- “An Update on MJO Task Force Activities and Plans”, 36th Climate Diagnostic and Prediction Workshop, Ft. Worth, TX, October 3-6, 2011.
- “Enabling Regional Climate Model Evaluation: A Critical Use of Observations for Establishing Core Climate Assessment Capabilities”, Presentation to U. S. Navy Rear Admiral Titley, JPL, November 7, 2011.
- “The Madden-Julian Oscillation as a Source of Predictability: Observation Assets, Prediction Capabilities, Modeling Resources & Applications”, Center For Prototype Climate Modeling, New York University, Abu Dhabi Institute, Workshop on Tropical and Extra-tropical Interactions in Climate, Abu Dhabi, 20-22 March, 2012.
- “Evaluating CMIP/IPCC Simulations using Contemporary Satellite Observations”, Committee On Earth Observing Satellites (CEOS) – Climate Working Group, NCDC, Asheville, NC, April 18, 2012.
- “The Madden-Julian Oscillation as a Source of Predictability”, NCAR Advanced Study Program, Boulder, CO, June 12, 2012.
- “Leveraging the MJO for Predicting Envelopes of Tropical Wave and Synoptic Activity at Multi-Week Lead Times”, Office of Naval Research, Directed Research Initiative on Seamless Prediction Workshop, Monterey, CA, July 17, 2012.
- “Climate Model Diagnostics and Evaluation”, 2<sup>nd</sup> JPL Center for Climate Sciences Summer School, Caltech, August 8, 2012.
- “Vertical Structure and Diabatic Processes of the MJO: Global Model Evaluation Project, MJO Task Force/YOTC and GASS”, 1<sup>st</sup> GEWX Pan-GASS Meeting, Boulder, CO, September 10-13, 2012.
- “Vertical Structure and Diabatic Processes of the MJO: Global Model Evaluation Project, MJO Task Force/YOTC and GASS”, Annual WGCM Meeting, Hamburg, Germany, September 24-27, 2012.
- “obs4MIPs: Satellite observations for CMIP5/IPCC Model Evaluation”, Annual WGCM Meeting, Hamburg, Germany, September 24-27, 2012.
- “YOTC: Accomplishments and Near-Term Activities”, THORPEX International Core Steering Committee Meeting, WMO Headquarters, Geneva, October 3-5 2012.
- “Vertical Structure and Diabatic Processes of the MJO: Global Model Evaluation Project, MJO Task Force/YOTC and GASS”, Annual WGNE Meeting, Toulouse, France, November 5-8, 2012.
- “obs4MIPs: Satellite observations for CMIP5/IPCC Model Evaluation”, Annual WGNE Meeting, Toulouse, France, November 5-8, 2012.
- “MJO as a Phenomena”, International Centre for Theoretical Physics (ICTP) Monsoon Targeted Training Activity, Tropical Meteorology (IITM), Pune, India, January 15-17, 2013.
- “MJO Prediction & Predictability”, International Centre for Theoretical Physics (ICTP) Monsoon Targeted Training Activity, Tropical Meteorology (IITM), Pune, India, January 15-17, 2013.
- “MJO impacts on Earth System”, International Centre for Theoretical Physics (ICTP) Monsoon Targeted Training Activity, Tropical Meteorology (IITM), Pune, India, January 15-17, 2013.
- “MJO Research Activities”, MJO Multi-University Research Initiative Workshop, JPL, Pasadena, CA, February 25-26, 2013.
- “obs4MIPs: Satellite observations for CMIP5/IPCC Model Evaluation”, 2<sup>nd</sup> WCRP Data Advisory Council (WDAC), Darmstadt, Germany, March 4-6, 2013.
- “Intraseasonal Variability Hindcast Experiment (ISVHE): MJO Prediction and Predictability”, NOAA Climate Programs Office, MAPP Webinar, May 7, 2013.

- “Madden Julian Oscillation”, Center for Climate Sciences/JPL, October 2013.
- “Predictability of the Madden-Julian Oscillation in the Intraseasonal Variability Hindcast Experiment (ISVHE)”, International Monsoon Workshop – V, Macau, October 2013.
- “Developing a systematic set of observations, diagnostics/metrics and tools for evaluating Regional Climate Models”, International Conference on Regional Climate - CORDEX 2013, Brussels, November 2013.
- “The Madden-Julian Oscillation & Atmospheric Rivers: Key Phenomena for Predicting Weather & Water”, Operation Sierra Storm. 2-Day meeting with broadcast meteorologists, Lake Tahoe, CA, January 2014.
- “Filling Measurement Gaps For A Specific Essential Climate Variable”, National Academy of Science Study on “A Framework for Analyzing the Needs for Continuity of NASA-Sustained Remote Sensing Observations of the Earth from Space”, Washington DC, January 2014.
- “New and Future Remote Sensing Capabilities for Monitoring Earth’s Fresh Water”, California Agriculture Institute, Sacramento, CA, January 2014.
- “Predictability of the Madden-Julian Oscillation in the Intraseasonal Variability Hindcast Experiment (ISVHE)”, International Conference on Subseasonal to Seasonal Prediction, NCEP/NOAA, College Park, February, 2014.
- “The Madden-Julian Oscillation & Atmospheric Rivers: Key Phenomena for Predicting Weather & Water”, NASA + CA Dept Water Resources Workshop, Sacramento, CA, February 2014.
- “AR Science Gaps/Objectives”, Calwater 2 Campaign Planning Workshop, San Diego, April, 2014.
- “obs4MIPs Summary, Status and Plans”, obs4MIPs for CMIP6 Meeting, Washington DC, April 2014.
- “The Madden-Julian Oscillation & Atmospheric Rivers: Key Phenomena for Predicting Weather & Water”, Water Authority of Orange County, Orange CA, May 2014.
- “Atmospheric Rivers and Sub-seasonal Forecasting”, Remote Sensing Applications Workshop, Western States Water Council, Pasadena, CA, August 2014
- “WCRP/WWRP S2S Project and other MJO & AR Activities”, California Drought Winter Outlook Workshop – California Department of Water Resources, San Diego, CA, November 2014
- “Observations, diagnostics/metrics and tools for evaluating Regional Climate Models”, 1st CORDEX MENA-CA Meeting, Nicosia, Cyprus, November 2014
- “Predictability Studies Using the Intraseasonal Variability Hindcast Experiment (ISVHE)”, Fall AGU, San Francisco, CA, December 2014.
- “Progress in Subseasonal Weather/Climate Forecasting”, Drought Response Workshop – California Department of Water Resources, Irvine, CA, February 2015.
- “Predictability of Tropical Subseasonal Variability”, NMME Sub-seasonal Forecast System Exploratory Workshop, College Park, MD, March 2015
- “JPL Contributions to Water Cycle Science and Applications”, Southern California Water Forum, Protecting our Future, Hosted by U.S. Congresswoman Grace Napolitano, Cal Poly Pomona, August 2015.
- “Predictability studies using the Intraseasonal Variability Hindcast Experiment (ISVHE)”, Workshop on subseasonal predictability, ECMWF, Reading, UK, November 2015.
- “The Increasing Need For System Engineering To Advance Earth System Science”, JIFRESSE/UCLA Open House, 10-Year Anniversary, JIFRESSE/UCLA, November 2015.
- “Remote Sensing and Earth Science: Science, Engineering & Technology”, CWEA-AWWA CPP Meeting, Cal Poly Pomona, March 2016.
- “Atmospheric Rivers: Water Extremes that Impact Global Climate, Regional Weather & Water Resources”, Water Resources Team Meeting, NASA Applied Sciences Program, Tuscaloosa, AL, April 2016.
- “Next Generation Earth System Prediction: Strategies for Subseasonal to Seasonal Forecasts”, Workshop on Improving Sub-seasonal to Seasonal (S2S) Precipitation Forecasting, Western States Water Council, San Diego, CA, June 2016.

- “Subseasonal Atmospheric River Research & Forecasting: Considerations from a Global Approach”, Workshop on Improving Sub-seasonal to Seasonal (S2S) Precipitation Forecasting, Western States Water Council, San Diego, CA, June 2016.
- “Contemporary Model Fidelity over the Maritime Continent”, PISTON Science Team Meeting, Office of Naval Research, Arlington, VA, July 2016.
- “Atmospheric River Modeling: Forecasts, Climate Simulations and Climate Projections”, International Atmospheric River Conference, UCSD, San Diego, CA, August, 2016.

## **ADVISING**

### *HIGH SCHOOL AND UNDERGRADUATE*

- Matthew Gross, SUNY Summer Research Institute for High School Students, 1999.
- Joseph Giannotti, SUNY Atmospheric Sciences, NWS/NOAA Support, 2002-03.
- Michele Balcom, SUNY Atmospheric Sciences, NSF/RAIRE Fellowship, 1998.
- Tomasz Tyranowski, University of Krakow, Poland, Caltech Summer Program, with Prof. Yung, 2006. Mentor, Andrew Atwong, GATE Science Project, Paper on Global Change, Spring 2008.
- Colin Logan, Caltech, Caltech Summer Program, with Prof. Yung, 2009.
- Ben Slawski, Caltech, Caltech Summer Program, with Prof. Yung, 2009, 2010, 2011.
- Cosmo Smith, JPL, Summer Program, with K. McDonald, 2010.
- Benjamin Wu, Caltech, JPL Summer Program, with Prof. Y. Yung, 2013.
- Jenny Marion, UC Berkeley, JPL Summer Program, with Prof. Y. Yung, 2013.
- Danielle Groenen, FSU, JPL Summer Program, 2014.

### *GRADUATE STUDENTS*

- Wufeng Zhou, SUNY M.S., graduated 9/96.
- Zhixiong Shi, SUNY M.S., graduated 9/97.
- Sandy Lucas, SUNY M.S., graduated 8/99.
- Zhenzhou Zhang, SUNY M.S., graduated 8/99.
- Masha Medovaya, SUNY M.S., graduated 12/99.
- Yangxing Zheng, SUNY M.S., graduated 6/03.
- Travis Baggett, SUNY, M.S., 9/02-9/04.
- Yasmine Bennouna, Foreign M.S. Internship, 3/02-8/02.
- Sandy Lucas, SUNY Ph.D., graduated 12/07.
- King-Fai Li, Caltech, Ph.D. student, Informal co-supervision. 2009-2013.
- Da Yang, Caltech, Ph.D. student, Thesis Committee Member. 2010-2014.
- Jinny Lee, M.S. student, Cal State, Intern, Los Angeles, 6/15-9/16.
- Deanna Nash, M.S. student, Cal State, Intern, Los Angeles, 9/15-5/17.
- Vicky Espinoza, M.S. student, USC, Intern, 6/16-5/17.
- Homero Paltan Lopez, Ph.D. student, Oxford, Summer Intern 5/16-8/16.
- Danielle Groenen, Ph.D. student, FSU, Summer Intern, 2014.

### *POSTDOCTORAL SCIENTISTS*

- Stefan Liess, University of Stony Brook, 2003-2005.
- Baijun Tian, Caltech Postdoc, 2004-2007.
- Jon Bergengren, JPL/Caltech Postdoc, 2004-2006.
- Xianan Jiang, JPL/Caltech Postdoc, 2006-2008.
- Christopher Woods, JPL/Caltech Postdoc, 2006-2008.
- Ki-Weon Seo, NPP/NRC Postdoc, 2005-2007.
- Terry Kubar, NPP Postdoc, 2008-2011.
- Bin Guan, JPL/Caltech Postdoc, 2009-2012.
- Ju-Me Ryoo, JPL/Caltech Postdoc, 2009-2012.
- Wei-Ting Chen, JPL/Caltech Postdoc, 2009-2012.
- Neena Joseph Mani, JIFRESSE Postdoc, 2012-present.

Yanjuan Guo, JIFRESSE Postdoc, 2012-2015.  
 Paul Loikith, JPL/Caltech Postdoc, 2012-2015.  
 Huikyo Lee, JPL/Caltech Postdoc, 2012-2015.  
 Justin Stachnik, JIFRESSE Postdoc, 2013-present.  
 Gregory Cesana, JPL/Caltech Postdoc, 2014-present.  
 Suhas Ettammal, JPL/Caltech Postdoc, 2014-present.  
 Darek Baronowski, JIFRESSE Postdoc, 2015-present.  
 Michael DeFlorio, JPL/Caltech Postdoc, 2015-present.

## **TEACHING**

### UNIVERSITY OF CALIFORNIA, LOS ANGELES

AOS 102 – Climate Change and Climate Modeling (Undergraduate Survey Course), Spring 2008.

### UNIVERSITY OF HAWAII, *Advanced Institute for Asian-Australian Monsoon System*

Guest Lecture – *Intraseasonal Variability and Predictability: An Overview of the Madden-Julian Oscillation, 2-12 January 2008*

### CALTECH

2 Guest Lectures – *An Overview of the Madden-Julian Oscillation*

ESE/Ge 173: Topics in Atmosphere and Ocean Dynamics: Tropical Atmosphere Dynamics, Fall 2007, Instructor: T. Schneider.

### STATE UNIVERSITY OF NEW YORK

ATM 205, Introduction to Atmospheric Science (Undergraduate Survey and Atmospheric Science Core Course), 2002, 2003.

ENS/PHY 119, Environmental Physics (Undergraduate Survey and Environmental Studies Core Course), 2001.

ATM 345, Theoretical Meteorology (Undergraduate Atmospheric Science Core Course), 1997, 1998, 2000.

ATM 346, Dynamic Meteorology (Undergraduate Atmospheric Science Core Course), 1999, 2001, 2003, 2004.

MAR 593, Theoretical Meteorology (Graduate Atmospheric Science Core Course), 1993, 1994, 1995, 1996.

MAR 528, Large-Scale Ocean Atmosphere Interaction (Graduate Elective Course), 1994, 1996, 1998, 2002.

OCN 694, Seminar in Atmospheric Sciences (Required Atmospheric Science Graduate Course), 1997, 2002, 2003, 2004.

## **INSTITUTIONAL SERVICE & ROLE HIGHLIGHTS**

### STATE UNIVERSITY OF NEW YORK

Organize ITPA/MSRC Seminar Series, Spring 1994 to Fall 1995.

Member, Environmental Studies Curriculum Working Group, Summer 1995 to Spring 1997.

Chair, ITPA Departmental Examination Committee, Fall 1994 to Summer 1999.

Member, MSRC Graduate Program Committee, Fall 1994 to Fall 1997.

Member, MSRC Admissions Committee, Fall 1996 to Summer 1999.

Member, MSRC Faculty Salary Survey Task Force, Spring 1998.

Member, MSRC Physical Oceanography Search Committee, Spring/Summer 1998.

Member, MSRC Macro-Project Committee, Spring 1998 to Fall 1998.

Member, MSRC Faculty Advisory Committee, Summer 1998 to Fall 1998.

Chair, MSRC Computer Personnel Task Force, Summer 1999.

Contributed to SUNY's successful application for Internet2 Service, Spring 1999.

Member, ITPA Atmospheric Dynamicist Search Committee, Winter/Spring 2001.

Member, MSRC Undergraduate Program Committee, Fall 2000 to Summer 2001.

Member, MSRC Graduate Program Committee, Fall 2000 to present.

Member, MSRC Electronics Shop Evaluation Committee, Spring-Fall 2002.

Member, Institute for Terrestrial and Planetary Atmospheres (ITPA) Departmental Examination Committee, Fall 2001 to present.  
 Member, Arts and Sciences Senate, December 2001 to December 2002..  
 Member, SUNY Academic Senate, December 2001 to December 2002.  
 Co-Developer/Investigator of Long Island Sound Ferry-Based Marine and Atmospheric Observing System ([www.stonybrook.edu/soundscience](http://www.stonybrook.edu/soundscience)), 2002-04.  
 Member, Search Committee, MSRC Assistant Dean, Spring 2003.  
 Member, Marine Sciences Research Center (MSRC) Electronic Shop Advisory Committee, Spring 2003 to present.

*JPL*

CloudSat Pre-Ship Review Board, Feb. 2005.  
 AGU Fall 2005 Press Release, Cloud Ice Discoveries From the Microwave Limb Sounder (MLS): Comparisons With Global Weather & Climate Models.  
 Co-I on two NRC Decadal Study Mission Concepts, CAMEO, AIRES, 2006.  
 Three Senior (Internal) Reviews: GRACE, GPS, TOPEX, 2006.  
 NASA Group Achievement Award, Aura MLS Science Team, 2006  
 JPL 101 Lecture, Removing the Mystery of Predicting Climate Change, July 2006.  
 AIRS News Release, Scientists Surf the Seas of Space to Catch an Atmospheric Wave, Feb 02, 2006  
 Member, Ed Stone Award Committee, 2006.  
 Two Senior (Internal) Reviews: CloudSat, AIRS, 2007.  
 Member, Principal Promotion Advisory Board, Division 32, 2007.  
 Co-Organizer, JPL-UCI Satellite Observations of the Global Water Cycle Workshop, Irvine, CA, March 2007.  
 Co-Initiator, UCLA-JPL Joint Institute for Regional Earth System Science and Engineering (JIFRESSE; [www.jifresse.ucla.edu](http://www.jifresse.ucla.edu)), 2005-06.  
 Member, Hydrology Strategic Hire Search Committee, Offer for N. Molotch, Spring 2007.  
 Member, Ed Stone Award Committee, 2007.  
 Member, PATH (NRC Decadal Study Recommended Geostationary Sounder) Science Working Group, Spring 2007 - present.  
 von Karman Lecture, Removing the Mystery of Predicting Climate Change, Oct 18, & 19, 2007.  
 Member, Cloud-Aerosol Scientist Hire Search Committee, Offers for D. Wu and A. Davis, Winter 2008.  
 Member, Ed Stone Award Committee, 2008.  
 Member, JIFRESSE Executive Committee, 2008 – present.  
 Member, JIFRESSE Promotion Committee, 2009 – present.  
 Earth and Space Science Colloquium Contact: J. Meehl (NCAR), 2009 Visit.  
 Member, JPL Chief Earth Scientist's Global Change and Energy Science Advisory Group, 2008-10.  
 Chair, Earth Sciences Search Committee, Offers & Acceptances to Painter, Fisher & Matheou, 2009.  
 Co-Chair, Senior Climate Scientist Lead, Offer & Acceptance to G. Stephens, 2009-2010,  
 Co-lead/member, Water Cycle Theme Development, Earth Science and Technology Directorate, Meetings convened with C. Elachi and M. Frielich. 2009.  
 Co-lead, Observations and IPCC, for Global Change and Energy Science Advisory Group, Earth Science and Technology Directorate in partnership with PCMDI, 2009-present.  
 Member, Science and Technology Management Committee (STMC), March 2010-present.  
 Attendee, NASA Advisory Council, Earth Sciences Subgroup, March 2010.  
 Strategic Initiative Lead, Advanced Imaging and Rapid Analysis - Earthquakes, \$750k/yr, Mar 2010-13  
 Strategic Initiative Lead, Center for Climate Sciences, \$1M/yr, 2010-13, \$500k/yr 2014-15.  
 Strategic Initiative Lead, Climate Modeling and Observations, \$1.3M/yr, 2010 - 2013  
 Present ESTD Climate Foci, JPL Executive Committee Retreat, Santa Barbara, CA, Apr 2010.  
 Brief NASA Earth Science Division Director, M. Freilich, Satellite Observations for IPCC, Jun 2010.  
 Brief NASA Administrator C. Bolden on JPL Water Cycle and Resource Management Foci, Jun 2010.  
 Earth and Space Science Colloquium Contact: V. Ramanathan (Scripps), Jul 2010 Visit.  
 Brief UKMO Climate Leadership on Satellite Observation and IPCC/CMIP Activity, Dec 2010.

Co-Organizer, with P. Gleckler, J. Teixeira and R. Ferraro, Joint NASA/JPL-DOE/PCMDI Workshop, Better use of satellite data in evaluating climate models contributing to CMIP and assessed by IPCC, Oct 12-13, 2010, LLNL, Livermore, CA

Co-Chair, Search Committee, Senior Climate Lead, Offer and Acceptance to G. Stephen, 2009-2010.

Co-Organizer, with J. Hyon, D. Crichton and P. Webster, NASA Technical Data System Workshop for Planning the IPCC, Nov 9-10, 2010, GSFC/NASA, Greenbelt, MD.

Principal Investigator Project and/or Deputy Project Scientist Recommendations, OCO-2 & TES, 2010.

Brief NASA SERVIR Leadership on Regional Climate Model Evaluation System, Feb 2011.

Member, Ed Stone Award Committee, Feb 2011.

Brief UK STFC Leadership on JPL Earth Sciences Program, Mar 2011.

Brief NASA Chief Scientist, Waleed Abdalati, on JPL Earth Science portfolio, Sep 29, 2011

Brief Office of Science and Technology Program, Senior Policy Analyst, Johannes Loschnigg, on JPL Earth Science portfolio, Oct 24, 2011

Brief U. S. Navy Rear Admiral Titley on JPL Earth Science portfolio, Nov 7, 2011

Lead Science Reviews for Portfolio of JPL Earth Ventures Small Satellite (EV-M1) Proposals, 2011.

Science Team Lead, Project and/or Deputy Project Scientist Recommendations, AIRS, SWOT, GRACE-FO, DESDynI, Jason-3, 2011.

Media Training, Jan 10, 2012.

Next Generation Ocean Vector Wind Study, Jan 11-12, 2012.

Facilitate JPL satellite data and organizational contributions to obs4MIPs, 2010-2012.

Facilitate JPL-led GCM Evaluation Studies using Satellite Data for IPCC AR5 Deadline, 2011-2012.

Chair, Search Committee, Senior Carbon Cycle Lead, Offer and Acceptance to D.Schimel, 2011-2012.

Lead Science Reviews for Portfolio of JPL Earth Ventures Instrument (EV-I1) Proposals, 2012.

Project and/or Deputy Project Scientist Recommendations, Aquarius, 2012.

Initiate development and planning of Water Cycle Science Internal Workshop, Jan-Jun, 2012.

Co-develop JPL-UKMO-U.Texas Partnership Activity on Climate Modeling, 2011-12.

Briefing to NASA Administrator, Charles Bolden, on JPL Earth Science portfolio, Feb 22, 2012.

Briefing to Congresswoman, Judy Chu, California's 32<sup>nd</sup> District, on JPL Earth Sciences, Mar 13, 2012.

Facilitate development of science sponsorship and framework for GPS/COSMIC-2 Science, 2012.

Briefing to NASA Deputy Director for Research, Earth Sciences, Jack Kaye, Jun 19, 2012.

Keck Institute for Space Studies, Earth Science Proposal Reviews, Jun 20, 21, 2012.

Client Lead, Foundry Study on Sea Level Research and Applications, Jun 25, 2012.

Briefing to Science & Technology Officer, USAID, Alex Dehgan, Jul 20, 2012.

Briefing to Regional Coordinator of the National Climate Assessment, US Global Change Research Program, Fred Lipschultz, on JPL Earth Science and Applications portfolio, Jul 21, 2012.

Co-Lead early Science Reviews of JPL Earth Ventures Instrument (EV-S2) Portfolio, 2012.

Co-Lead Science Reviews of JPL Earth Ventures Instrument (EV-I2) Portfolio, 2012-13.

Capture Lead and Deputy PI of Atmospheric River Experiment (AREX), EV-S2 Proposal, 2012-2014.

Capture Co-Lead, Bay Delta Science and Program Development, 2012-present.

Developed JPL collaboration with Delta Science Council's Fellows Program, 2012-2014.

Earth Science and Technology Directorate Program Lead for Carbon Cycle & Ecosystems R&TD Strategic Initiative, \$850k/yr, 2013-2016.

Earth Science and Technology Directorate Program Lead for Water Cycle and Resources R&TD Strategic Initiative, \$950k/yr, 2014-2017.

Earth Science and Technology Directorate Program Lead for Water Cycle and Resources Strategic Hire, J. Famiglietti, 2014.

Earth Science and Technology Directorate Program Lead for Science and System Engineering R&TD Strategic Initiative, \$600k/yr, 2015-2017.

Principal Investigator of Regional Climate Model Evaluation System contribution to Earth Science and Technology Directorate Model Evaluation Program Thrust, 2010-present.

Co-Lead Science Reviews for JPL Senior Mission Reviews, 2013.

Leadership meetings: JPL Chief Scientists, ESTD Senior Staff, Science Division, Earth Science sections.

Project and/or Deputy Project Scientist Recommendations, OCO-3, Aquarius, SMAP, 2012-2013.  
 Science Guidance/Leadership – ESTD Retreat, Director Review and Discussion, & POC HQ w/ J. Kaye.  
 President and Director Fund (PDF) Proposal Review and Recommendation Committee, 2012.  
 President and Director Fund (PDF) Proposal Review and Recommendation Committee co-Chair, 2013.  
 President and Director Fund (PDF) Proposal Review and Recommendation Committee, 2014.  
 President and Director Fund (PDF) Proposal Review and Recommendation Committee, co-Chair, 2015.  
 University Liaison with Caltech via Visiting Faculty Associate Appointment, 2010-present.  
 University Liaison with JIFRESSE/UCLA via Adjunct Faculty Appointment, 2010-present.  
 Developed ESTD Applied Science Program Manager (ASPM) Role; co-Supervise ASPM, 2012-2013.  
 Capture Co-Lead, Ocean Mixed-Layer Laser and Science (2013 IIP-declined & ROSES-selected).  
 Lead 2017 Decadal Survey Senior Scientist Strategic Discussions, 2012-present.  
 Presentation on Water and Remote Sensing, Space Week, State Capitol, Sacramento, CA, March 2013.  
 Informing California Council on Science & Technology’s California Water Plan, 2013.  
 Co-Led Earth Science and Technology Directorate A-Team Study on Precipitation & Clouds, 2013.  
 Co-Led Earth Science and Technology Directorate A-Team Study on Climate Modeling, 2013.  
 Provide reviews and concurrence on JPL Earth science news items and other outreach and education items, 2010-present.  
 Earth Science and Technology Directorate Reviews and Recommendations to Office of Chief Scientist and Technologist on R&TD Topic and Strategic University Partnership Proposals, 2010-present.  
 Earth Science and Technology Directorate development lead of Directorate’s Sea Level Thrust, 2012-present.  
 Provide guidance and review on ROSES/R&A via interactions with NASA HQ and Science Division, 2010-present.  
 Led Search for ESTD-supported Science Writer Intern, Rosalie Murphy, 2014.  
 Invited by NRC’s Climate Continuity Study to consult on Climate Models and Data Gaps, 2014.  
 Provide science support to JPL airborne science program, 2010-present; and organize quarterly Airborne Review & Discussion, 2015-present  
 Co-Led, with NASA HQ, Development of Strategy for Assessing Dynamic Downscaling, 2014-2015.  
 Co-Led development of JPL general overview flyer and analog for Earth Science and Technology Directorate, 2014-2015.  
 Led infrastructure improvement on Unlimited Release System for early identification of newsworthy research results.  
 Provide science guidance on formulation of proposals to Earth Ventures Instrument (EV-I3) and small mission (EV-M2) Portfolio, 2014-2015.  
 Co-Led discussions with National Geographic Magazine writers and photographers, leading to JPL/NASA focused Earth Science article for Fall 2015.  
 Co-Led Earth Science and Technology Program Office A-Team Study on Coastal and Inland Waters, 2015.  
 Provide science guidance on formulation of proposals to Earth Ventures Instrument (EV-I4) Portfolio, 2016.  
 Co-Led Collaboration Discussions with CNES Space Agency to Identify Collaboration for US Decadal Survey on Earth Science and Applications from Space, 2015.  
 Earth Science and Technology Directorate Program Lead for Weather R&TD Strategic Initiative, \$350k/yr, 2017-2019.  
 Earth Science and Technology Directorate Program Lead for Ocean Acidification R&TD Strategic Initiative, \$220k/yr, 2017-2019.  
 Earth Science and Technology Directorate Program Lead for Coastal & Inland Waters R&TD Strategic Initiative, \$550k/yr, 2017-2019.

## **RESEARCH FUNDING**

### *FUNDED AWARDS*



- Relationship Between Clouds, SST and Surface Fluxes on Seasonal & Interannual Time Scales Over the Western Pacific, PI: Waliser (SUNY) and co-PI: Gautier (UCSB), **NSF**, \$171k, 1994-97.
- Large-Scale Convection: Local and Remote Interactions in the Pan-American Climate System, PI: Waliser (SUNY), **PACS/NOAA**, \$96k, 1995-97.
- Analysis of the Shortwave Cloud Forcing and Surface Shortwave Flux in the Meteorological and Oceanographic (METOC) Modeling and Prediction Systems, PI: Waliser (SUNY), **ONR**, \$230k, 1997-2000.
- Removing Satellite Equatorial-Crossing-Time Biases from the Global Outgoing Longwave Radiation Data Set, PI: Waliser (SUNY) and co-PI: Janowiak (NCEP/NOAA), **NOAA/NASA**, \$109k, 1997-99.
- The Nature and Predictability of the Madden-Julian Oscillation in the Coupled Ocean-Atmosphere System. PI: Waliser (SUNY), co-PI: Jones (UCSB), co-Is: Lau (GSFC/NASA) and Schemm (NCEP/NOAA), **NSF**, \$245k, 1998-2000.
- Earth Remote Sensing Facilities for Research and Teaching at the State University of New York at Stony Brook, PI: Geller (SUNY), co-PIs: Lwiza, Waliser, Zhang, Cess, Lerda, **NASA**, \$105, 1998-99.
- Ocean Buoy Shortwave (OBS): A Data Set for Satellite Retrieval and GCM Validation. Waliser (SUNY), co-Is: Weller (WHOI), McPhaden (PMEL/NOAA) and Wielicki (Langley/NASA), **NASA**, \$126k, 1998-2000.
- Water Vapor Variations Associated with the Life Cycle of the MJO: Analysis of NCAR CCM and TOVS Pathfinder, PI: Waliser (SUNY), **NSF**, 25k, 1999-2000.
- Acquisition of a Real-Time Satellite Receiving System for Regional Environmental Research and Education, PI: Waliser (SUNY), co-PI: J. Tichler (BNL), **SUNY President's Office**, \$76k, 1999-2000.
- Intraseasonal Variability in the Indian Ocean: Scale Interactions and Climate Impacts, PI: Waliser (SUNY) and co-PI: Murtugudde (U. Maryland), **NASA**, \$299k, 2000-03.
- The Relationship Between American Lobster Mortality in Long Island Sound and Prevailing Environmental Water Column Conditions, PI: Wilson (SUNY), co-Is: Waliser and Swanson (SUNY), **NY & CT Sea Grant/NOAA**, \$176k, 2001-03.
- The Nature and Predictability of the Madden-Julian Oscillation in the Coupled Ocean-Atmosphere System. PI: Waliser (SUNY), co-PI: Jones (UCSB), co-Is: Lau (GSFC/NASA) and Stern (GFDL/NOAA), **NSF**, \$372k, 2001-2004.
- A Ferry-Based Observing System for Long Island Sound: Application to Physical Influences on Hypoxia, PI: Waliser (SUNY), co-PI: Wilson (SUNY), co-I: Reynolds (BNL), **NY Sea Grant**, \$243k, 2002-2004.
- Exploring the Benefits and Limits of Dynamical Predictions of the Tropical Intraseasonal Oscillation: Steps Towards an Experimental Prediction Program, PI: Waliser (SUNY), co-Is: Schubert (GSFC/NASA), Stern (GFDL/NOAA), M. Latif and S. Liess (MPI), **OGP/NOAA**, \$324k, 2001-04.
- Using Ferry-Based Marine And Atmospheric Observations To Improve Our Understanding And Modeling Capabilities Of Long Island Sound Hypoxia And The Roles Of Natural Versus Anthropogenic Forcing, PI: Wilson (SUNY), co-PI: Waliser (SUNY), **EPA**, \$120k, 2004-05.
- Dynamical Predictability and Present-Day Forecast Skill of the Subseasonal Variability, PI: Waliser (JPL), co-Is: Schubert (GSFC/NASA), Kirtman (COLA/GMU), Pan (NCEP/NOAA), **OGP/NOAA**, \$182k, 2005-06.
- Atmospheric Hydrological Cycle Thrust, PI: Waliser (JPL), co-Is: Salawitch and Gunson (JPL), **RTD/JPL**, \$600k, 2004-07.
- Exploiting Satellite Observations And Cloud-Resolving Models To Improve GCM Representations Of Cloud-Radiation-Dynamical Interactions, PI: Waliser (JPL), co-Is: Yung (Caltech), Kuang (Harvard), Wu (GSFC/NASA), **MAP/NASA**, \$300k, 2005-06.
- Pathways to predictability on subseasonal time scales: assessing the role of tropical forcing and land surface conditions, PI: Schubert (GSGC/NASA), 9 other Co-Is including Waliser (JPL), **MAP/NASA**, \$1.5M, 2005-10.

- A Merged Atmospheric Water Data Set from the A-Train, PI: Fetzer (JPL), several other co-Is including Waliser (JPL), **NEWS/NASA**, \$1.5M, 2005-10.
- Investigation of climatic impacts on US west coast atmospheric and terrestrial processes using numerical downscaling techniques, PI: Waliser (JPL), co-I: Xue (UCLA), **DRDF/JPL**, \$25k, 2006-07.
- Predictability and Model Verification of the Water and Energy Cycles: Linking Local, Regional and Global Scales, PI: Waliser (JPL), co-I: Schubert (GSFC/NASA), **NEWS/NASA**, \$600k, 2007-10.
- Coupling Regional and Global Processes: Towards the Next Generation of Space Missions, PI: Waliser (JPL), co-Is: Liou, Xue, Hall, Fovell (UCLA) and Li, Eldering and Chao (JPL), **DRDF/JPL**, \$200k, 2006-07.
- Deriving a PBL Height Climatology from GPS and AIRS: A Valuable Resource for Evaluating and Improving Weather and Climate Models, PI: Waliser (JPL), co-I: Ao (JPL), **Spontaneous Concept/RTD/JPL**, \$30k, 2007.
- Integrating CloudSat and A-Train Observations of Upper-Tropospheric Cloud and Hydrological Processes: Application to GCM Evaluation and Improvement: PI: Waliser (JPL), **CloudSat Mission Support/JPL**, ~200k/yr, 2007-2010.
- Using Large Inland Water Bodies to Characterize and Predict Regional Climate Change, PI: Hook (JPL), co-I: Waliser (JPL), **EOS/NASA**, \$450k, 2007-10.
- PBL Height Climatology from GNSS/RO Measurements: A New Resource for Evaluating and Improving Weather and Climate Models, PI: Ao (JPL), co-I: Waliser (JPL), **NASA**, \$460k, 2007-10.
- Evaluating Key Uncertainties in IPCC Climate Change Projections of California Snowpack: Topography, Snow Physics, and Aerosol Deposition, PI: Waliser (JPL), co-Is: Liou, Xue, Hall, Fovell, Kim (UCLA) and Li, Eldering, Chao, Saatchi (JPL), **DRDF/JPL**, \$200k, 2007-08.
- Observationally Constrained Climate Prediction and Risk Assessment, PI: Teixeira (JPL), co-Is: A. Braverman, K. Bowman, R. Duren, A. Eldering, E. Fetzer, C. Miller, M. Santee, D. Waliser (JPL), **RTD/JPL**, \$200k, 2008.
- Judicious Application of Satellite Observations To Evaluate And Improve Cloud Ice and Liquid Water Representations In Conventional and Multi-Scale Weather & Climate Models, **NASA/MAP**; PI: Waliser (JPL), Period: 2008-2012, Total Amount: \$1,100k.
- Improving the representation of shallow cumulus convection in coupled systems: Integrating satellite observations, high-resolution models and new parameterizations **NASA/MAP**; PI: J. Teixeira (JPL), co-I: Waliser, Period: 2008-2012, Total Amount for co-I: \$80k.
- Physical-Biological Interactions Associated with Tropical Subseasonal Variability and Their Impacts on SST **NASA/PO**; PI: R. Murtugudde (UMD), Period: 2008-2012, Total Amount for co-I: \$225k.
- Intraseasonal Variations of Atmospheric Composition and Their Connection to the Madden-Julian Oscillation: Satellite/In-Situ Data Analysis and Chemistry/Transport Modeling, **NSF**; PI: B. Tian (UCLA), co-I: D. Waliser (UCLA); Period: 2009-2012, Total Amount: \$380k.
- Observationally Constrained Climate Prediction and Risk Assessment, PI: Teixeira (JPL), co-I: D. Waliser (JPL), **RTD/JPL**, Period: 2009, Total Amount: \$400k.
- Northward Propagation Mechanisms of Subseasonal Eastern Pacific ITCZ Variability: Connections between Extreme Events, Subseasonal and Interannual Variability, **NOAA**; PI: X. Jiang (UCLA), co-PI: D. Waliser (UCLA); Period: 2009-2012, Total Amount: \$380k.
- Collaborative Research: Exploring the Chemical Reach of the Madden-Julian Oscillation: Satellite / In-Situ Data Analysis and Chemistry/Transport Modeling, **NSF**; PI: B. Tian (UCLA), co-PI: D. Waliser (UCLA); Period 2009-2012, Total Amount: \$299k
- Vertical heating structure in large-scale coupled tropical waves, **NSF**; PI: X. Jiang (UCLA), co-PI: D. Waliser (UCLA); Period: 2009-2012, Total Amount: \$420k.
- Integrating CloudSat and A-Train Observations of Upper-Tropospheric Cloud and Hydrological Processes: Application to GCM Evaluation and Improvement: PI: Waliser (JPL), **CloudSat Mission Support/JPL**, Period: 2010-2011. Total Amount: \$100k.
- Multi-Model Ensemble Forecast of MJO, **NOAA CBT**, PI: B. Wang (UH), co-PI: D. Waliser (UCLA), Period: 2010-2013, Total Amount: \$480.

Coupled Ocean-Atmosphere Dynamics and Predictability of MJO's, **ONR**, PI: A. Miller (SIO/UCSD), co-PI: D. Waliser (UCLA0, Period: 2010-2013. Total co-I Amount: \$120k.

Using Satellite Data and ECCO Ocean Analysis In Support of CLIVAR/DYNAMO: Model Evaluation and Hypothesis Testing, **NASA/PO**, PI: D. Waliser (JPL), Period: 2011-2014, Total Amount: \$680k.

ExArch: Climate analytics on distributed exascale data archives, **NSF G8 Initiative**, PI: M. Juckes (STFC-UK), co-PI: D. Waliser (UCLA), Period 2011-2015. Total UCLA Amount: \$300k.

Enabling Regional Climate Model Evaluation: A Critical Use of Observations for Establishing Core NCA Capabilities, **NASA NCA**, PI: D. Waliser (JPL), Period: 2011-2013, Total Amount: \$950k.

Diabatic Processes of the MJO: Enabling and Analyzing an MJO TF and GASS Global Model Evaluation Project, **NSF**, PI : D. Waliser (UCLA), Period: 2012-2015, Total Amount: \$497k.

Modulation of Tropical Cyclone (TC) Activity over the Intra-Americas Sea by the Intraseasonal Variability: Implications for Dynamical TC Prediction on Intraseasonal Time Scales, **NOAA MAPP**; PI: X. Jiang (UCLA), co-PI: D. Waliser (UCLA); Period: 2012-2015, Total Amount: \$349k.

Understanding the Role of Convective Momentum Transport for the Madden-Julian Oscillation, **NSF**; PI: X. Jiang (UCLA), co-PI: D. Waliser (UCLA); Period: 2012-2015, Total Amount: \$496k.

Leveraging the MJO for Predicting Envelopes of Tropical Wave and Synoptic Activity at Multi-Week Lead Times, **ONR**, PI : D. Waliser (UCLA), Period: 2012-2015, Total Amount: \$575k.

Physics Constrained Stochastic-Statistical Models for Extended Range Environmental Prediction, **ONR-MURI**, PI: A. Majda (NYU), co-I: D. Waliser (UCLA); 2012-2017, Total Amount: \$7.5M; UCLA Amount: \$391k.

Bridging Observations and Models to Improve Cloud-Radiation-Dynamical Interactions and Provide Guidance on Future Satellite Observations, **NASA/MAP**; PI: Waliser (JPL), Period: 2013-2017, Total Amount: \$990k.

Characterizing and Understanding Cloud-Radiation-Dynamics using CloudSat/CALIPSO and other A-Train observations as well as Reanalysis for Model Improvement, **NASA/CloudSat**; PI: J.-L. Li (JPL), Period: 2013-2015. \$473k

Advancing MJO Research with CYGNSS: Multi-Scale, MCS and Ocean Interactions, **NASA/Weather**; PI: Waliser (JPL), Period: 2013-2017, Total Amount: \$444k.

Enabling Regional Climate Model Evaluation: A Critical Use of Observations for Establishing Core NCA Capabilities, **NASA NCA**, PI: D. Waliser (JPL), Period: Extended to 2014, Amount: \$399k.

Advancing Monsoon Weather-Climate Fidelity in the NCEP CFS through Improved Cloud-Radiation-Dynamical Representation, **India National Monsoon Mission**, PI: D. Waliser (UCLA), Period: 2013-2017, Amount: \$327k.

Atmospheric Rivers: Water Extremes that Impact Global Climate, Regional Weather and Water Resources, **NASA Energy and Water**, PI: D. Waliser (JPL), Period 2014-2016, Amount \$427k.

Enabling Regional Climate Model Evaluation: A Critical Use of Observations for Establishing Core NCA Capabilities - Renewal, **NASA NCA**, PI: D. Waliser (JPL), Period 2014-2017, Amount: \$1.2M.

Towards an Improved Understanding of the Initiation and Propagation of the Madden-Julian Oscillation, **NOAA Climate Process Team**, PI: X. Jiang (JIFRESSE/UCLA), Period 2015-18, Amount: \$1.45M.

Leveraging the MJO for Multi-Week Predictions: Improving Understanding of MJO - MC Interactions, **ONR**, PI: D. Waliser (JPL), Period 2016-2019, Amount \$360k.

## CONFERENCES AND WORKSHOPS

Contact [duane.waliser@jpl.nasa.gov](mailto:duane.waliser@jpl.nasa.gov) for complete list.