

Wayne F. Feltz

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Curriculum Vitae
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RESEARCH INTERESTS

- Utilization of satellite-based observations to improve nowcasting/forecasting of aviation weather hazards such as turbulence, convection, winds, and volcanic ash
- Remote sensing of thermodynamic state using passive and active instrumentation
- Infrared hyperspectral resolution research toward improved weather observations
- Validation of remotely sensed atmospheric state variables
- Understand impact of future satellite observations through simulation
- Severe weather nowcasting using new atmospheric technologies

Science Team, Committee, and Working Group Memberships

- American Meteorological Society – EUMETSAT Joint Meteorological Satellite Conference Organizational Planning Committee Representative, Boston, MA, USA September 2019
- European Geophysical Union session chair Aviation Meteorology Vienna, Austria 2017-2019
- European Convective Working Group member – Florence, Italy 2016
- European Geophysical Union session chair Vienna, Austria 2016
- European Meteorological Satellite session chair – Toulouse, France 2015
- NOAA GOES-R Aviation Algorithm Working Group Co-Chair 2007-present
- European/American Meteorological Society satellite conference organizational committee member – Vienna 2013 (United States representative)
- American Meteorological Society (AMS) Journal of Atmospheric and Oceanic Technology Editor 2009-2012
- European Meteorological Satellite conference organizational committee member – Poland 2012 (United States representative) – 2011-2012
- United States NOAA/FAA/DOD/DOE Joint Planning and Development Office (JPDO) air traffic improvement task force – weather observations – 2008-2011
- Member of AMS Satellite Committee 2006-2012
- UW-Madison Academic Staff Executive Committee representative 2009-2011
- AMS Committee on Radio Frequency Allocations 2009 -2010
- AMS Satellite Conference Session Chair, Phoenix, Arizona 2009
- American Meteorological Society NPOESS Satellite Conference Invited Speaker 2008
- EUMETSAT/AMS Satellite Conference Organizational Committee Member and Session Chair, Amsterdam, Netherlands, 2007
- University of Wisconsin Graduate School Committee on Academic Staff Issues (GS-CASI) Representative 2003-2013

HONORS AND AWARDS

- *National Aeronautics and Space Administration (NASA) Group Achievement Award for Outstanding Achievement in the Success of GOES-R Satellite Launch and for the World's Highest Quality Weather Monitoring and Forecasting, June 15, 2017*
- *Certificate of Appreciation in Recognition as a member of the Committee on Academic Staff Issues 2008-2017*
- *Certificate of Appreciation for serving as Vice Chair of GS-CASI 2013*
- *Selected as a UW-Madison Kauffman Seminar series participant 2013-2014*
- *NOAA-CIMSS Collaboration Award 2011*

- *AMS Gold Star Editor Award 2010*
- *NASA LaRC Paul Holloway Technology Transition Award 2008*
- *NASA Honors Group Achievement Award (ASAP) 2006*
- *NASA Earth Sciences Application Team Group Award 2005*
- *NASA Aviation Safety and Security Program Award 2005*
- *University of Wisconsin-Madison Lettau Award for "Thesis of the Year" April 1995*

PUBLICATIONS

Authored or coauthored over 30 peer reviewed scientific publications and are available at <http://www.ssec.wisc.edu/~waynef> including:

- Feltz, W. F., W.L. Smith, R.O. Knuteson, H.E. Revercomb, H.M. Woolf, and H.B. Howell, 1998: Meteorological applications of temperature and water vapor retrievals from the ground-based atmospheric emitted radiance interferometer (AERI). *J. Appl. Meteor.*, **37**, 857-875.
- Feltz, W. F. and J. R. Mecikalski, 2002: Monitoring High Temporal Resolution Convective Stability Indices Using the Ground-based Atmospheric Emitted Radiance Interferometer (AERI) During the 3 May 1999 Oklahoma/Kansas Tornado Outbreak. *Wea. Forecasting*, **17**, 445-455.
- Feltz, W. F., D. Posselt, J. Mecikalski, G. S. Wade, and T. J. Schmit, 2003: Rapid Boundary Layer Water Vapor Transitions. *Bull. Amer. Meteor. Soc.*, **84**, 29-30.
- Feltz, W. F., H. B. Howell, R. O. Knuteson, H. M. Woolf, and H. E. Revercomb, 2003: Near Continuous Profiling of Temperature, Moisture, and Atmospheric Stability using the Atmospheric Emitted Radiance Interferometer (AERI). *J. Appl. Meteor.*, **42**, 584-597.
- Feltz, W. F., D.D. Turner, H.B. Howell, W.L. Smith, R.O. Knuteson, H.M. Woolf, R. Mahon, and T. Halter, 2005: Retrieving temperature and moisture profiles from AERI radiance observations: AERIPROF value added product technical description. DOE ARM Technical Report, TR-066, Available from http://www.arm.gov/publications/tech_reports/arm-tr-066.pdf
- Feltz, W. F., K. M. Bedka, J. Otkin, and S. A. Ackerman, 2009: Understanding Satellite-Observed Mountain Wave Turbulence Signatures Using High-Resolution Numerical Model Data. Accepted for publication to *J. of Wea And Forecasting*, **24**, No. 1.

CURRENT RESEARCH

- **Principal Investigator:** GOES-R Proving Ground, funded by NOAA (2009–present)
- **Principal Investigator:** Boeing Company: Aviation Satellite Decision Support (2011 – present)
- **Program Manager:** Overall NOAA Cooperative Agreement for Meteorological Satellite Studies (2012–present)
- More information at <http://www.ssec.wisc.edu/~waynef/>

FIELD EXPERIMENT PARTICIPATION

- ⇒ Participant in STORM-FEST experiment, NOAA Funded, Coffeerville, KS, 1992
- ⇒ Participant in Point Mugu Refractivity Experiment, DOE ARM Funded, Pt Mugu, CA, 1993
- ⇒ Participant in OTIS, Oceanic Temperature Interferometric Survey, NASA Funded, Gulf of Mexico, January 1995
- ⇒ Participant in CAMEX 2, 3, Convection and Atmospheric Moisture Experiment, Wallops Island, Andros Island, NASA Funded, September, 1995, September, 1998
- ⇒ Participant in numerous SGP CART field campaigns, Southern Great Plains Cloud And Radiation Testbed for Atmospheric Radiation Measurement (ARM) program, Lamont, Oklahoma 1995-2000
- ⇒ Participant in WINCE Experiment, NASA Funded, Madison, WI 1997
- ⇒ Participant in WINTEX Experiment, NASA Funded, Madison, WI, 1999
- ⇒ Participant in WVSS Water Vapor Sensing System Validation Experiment, NOAA Funded, 1999
- ⇒ Participant in IHOP International H2O Experiment, Oklahoma Panhandle, DOE ARM funded, 2002
- ⇒ Co-I participant in WVSS-II Water Vapor Sensing System Validation Experiment, Louisville, KY, NOAA Funded, 2005, 2006
- ⇒ PI participant in TAVE TAMDAR Validation Experiment, NASA Funded, Memphis, TN, 2005
- ⇒ Participant in GIFTS EDU checkout experiment, NASA Funded, Logan, UT, 2006

- ⇒ Water Vapor Sensing System – II Validation Participation, NASA funded, 2009-2010
- ⇒ **Principal Investigator:** Plains Elevated Convection at Night (PECAN) Field Campaign “Collaborative Research: Low-level Jets in the Nocturnal Stable Boundary Layer: Structure, Evolution, and Interactions with Mesoscale Atmospheric Disturbances”, funded by NSF (2015-2017) - NSF funded, 2015-2017