

**Jordan Joel Gerth,  
Ph.D.**

National Weather Service Office of Observations  
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## **Professional Experience**

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**8/5/2019 to Present    Physical Scientist, NWS Leveraged Observations Lead  
Silver Spring, MD**

National Weather Service (NWS) Office of Observations (OBS)  
National Oceanic and Atmospheric Administration, Department of Commerce

- I serve as the NWS OBS subject-matter expert and primary liaison to NWS service delivery portfolios and operational/field offices for human factors related to leveraged observations (those that the NWS does not collect) and environmental satellite technologies in the weather forecast process.
- I conduct and oversee scientific research applying remote sensing techniques and observing systems to develop OBS program policies and priorities that inform agency requirements.
- I work with engineering, development, transition-to-operations, operations and maintenance, and governance processes associated with the NWS Advanced Weather Interactive Processing System (AWIPS) Program, the NCEP Central Operations (NCO) Integrated Dissemination Program (IDP) infrastructure, and other NWS operational environments, to drive leveraged observations and environmental satellite technologies into NWS operations.
- I support the OBS office director and NWS leadership on leveraged observations and environmental satellite matters to support related inter-agency and international initiatives and serve as the working-level liaison to NESDIS and OAR for observational matters. I am the NWS representative to the Coordination Group from Meteorological Satellites (CGMS), Satellite User Needs Working Group (SUNWG), and Interagency Council for Advancing Meteorological Services (ICAMS) Committee on Observational Systems (COBS) Subcommittee on Space-Based Observations (SC-SBO).
- I represent the NWS at conferences, meetings, and user forums, domestic and international, to convey user needs for weather observations and identify barriers to the exploitation of satellite data.
- I am a Contracting Officer's Representative (COR) overseeing and providing daily management for several contracts supporting OBS activities related to satellite data use at NWS offices.
- I mentor student interns, including organizing research projects related to the development of meteorological observations to enhance forecast applications.

**8/5/2019 to Present    Honorary Fellow**

**10/1/2016 to 8/5/2019    Associate Researcher**

**9/1/2014 to 10/1/2016    Assistant Researcher**

**1/1/2014 to 9/1/2014    Postdoctoral Research Associate**

Cooperative Institute for Meteorological Satellite Studies (CIMSS)  
Space Science and Engineering Center (SSEC)  
University of Wisconsin at Madison

- I led a team of scientists and software engineers on multiple projects related to meteorological and remote sensing applications research and software development and served as an advisor to the SSEC director on budget, organizational, and personnel matters.
- I conducted research and transitioned new, valuable satellite products and imagery from the Geostationary Operational Environmental Satellite R-Series (GOES-R) and Joint Polar Satellite System (JPSS) into NWS operations and through NOAA proving grounds and testbeds.
- I presented at scientific conferences and conducted numerous media interviews related to satellite meteorology, weather prediction, and spectrum use for scientific applications.
- I provided briefings to the Federal Communications Commission (FCC) and appeared before the U.S. House Committee on Science, Space, and Technology on concerns regarding spectrum allocated for Earth exploration-satellite service (EESS).

## **Personal Information**

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United States Citizen, Current Career Federal Employee

## **Education**

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- 9/2011 to 12/2013**      **University of Wisconsin at Madison (Graduate School)**  
*Doctor of Philosophy (Ph.D.), Atmospheric and Oceanic Sciences*  
*Distributed Minor (Courses from multiple programs)*  
 Ph.D. Dissertation Information  
 Title: *Sky Cover*  
 Advisor: Dr. Steven Ackerman
- 9/2009 to 12/2011**      **University of Wisconsin at Madison (Graduate School)**  
*Master of Science (M.S.), Atmospheric and Oceanic Sciences*
- 9/2005 to 5/2009**      **University of Wisconsin at Madison**  
 College of Letters and Science Honors Program  
*Bachelor of Science (B.S.) with Comprehensive Honors and majors in*  
*Atmospheric and Oceanic Sciences, Mathematics, and Political Science*

## **Professional Certifications and Training**

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- 6/2022**                      **American Meteorological Society**  
 Summer Policy Colloquium
- 9/2021**                      **Treasury Executive Institute**  
 Strategic Program Management Cohort
- 4/2021**                      **Federal Acquisition Institute**  
 Federal Acquisition Certification for Contracting Officer's Representatives (COR)  
*Level II (Up to \$10 million)*
- 8/2018**                      **National Telecommunications and Information Administration (NTIA)**  
 Federal Spectrum Management Training Course
- 9/2017**                      **University of Wisconsin at Madison**  
 School of Business Center for Professional and Executive Development  
*Professional Development Certificate: Advanced Management and Leadership*
- 1/2015**                      **Information Technology Infrastructure Library (ITIL)**  
*Foundation Certificate in Information Technology Service Management (ITSM)*
- 11/2013**                      **University of Wisconsin at Madison**  
 School of Business Center for Professional and Executive Development  
*Professional Development Certificate: Technical Leadership*

## **Scientific Publications (peer reviewed, 2018 to present only)**

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- Ayala, A. C. B., **J. J. Gerth**, T. J. Schmit, S. S. Lindstrom, and J. P. Nelson. "Parallax Shift in GOES ABI Data." *Journal of Operational Meteorology* 11 (2023).  
<https://doi.org/10.15191/nwajom.2023.1102>.
- Brotzge, Jerald A., Don Berchhoff, Dana L. Carlis, Frederick H. Carr, Rachel Hogan Carr, **Jordan J. Gerth**, Brian D. Gross, et al. "Challenges and Opportunities in Numerical Weather Prediction." *Bulletin of the American Meteorological Society* 104, no. 3 (March 2023): E698–705.  
<https://doi.org/10.1175/bams-d-22-0172.1>.

- Cintineo, John L., Michael J. Pavolonis, Justin M. Sieglaff, Daniel T. Lindsey, Lee Crounce, **Jordan Gerth**, Benjamin Rodenkirch, Jason Brunner, and Chad Gravelle. "The NOAA/CIMSS ProbSevere Model: Incorporation of Total Lightning and Validation." *Weather and Forecasting* 33 (February 2018): 331–45. <https://doi.org/10.1175/WAF-D-17-0099.1>.
- Gerth, Jordan J.** "It's Not Hot Air: Using GOES-16 Infrared Window Bands to Diagnose Adjacent Summertime Air Masses." *Meteorological Applications*, March 2019, 362–68. <https://doi.org/10.1002/met.1767>.
- Gerth, Jordan J.** "Shining Light on Sky Cover during a Total Solar Eclipse." *Journal of Applied Remote Sensing* 12 (June 2018): 1. <https://doi.org/10.1117/1.JRS.12.020501>.
- Gerth, Jordan J.**, Raymond K. Garcia, David J. Hoese, Scott S. Lindstrom, and Timothy J. Schmit. "SIFTing through Satellite Imagery with the Satellite Information Familiarization Tool." *Journal of Operational Meteorology*, December 2020, 121–32. <https://doi.org/10.15191/nwajom.2020.0810>.
- Hurwitz, Margaret M., S. Baxter, B. Brown, J. Carman, J. Dale, C. Draper, F. Horsfall, et al. "Six Priorities for Investment in Snow Research and Product Development." *Bulletin of the American Meteorological Society* 101 (November 2020): E2025–29. <https://doi.org/10.1175/BAMS-D-20-0218.1>.
- Miller, N. B., M. M. Gunshor, A. J. Merrelli, T. S. L'Ecuyer, T. J. Schmit, **J. J. Gerth**, and N. J. Gordillo. "Imaging Considerations From a Geostationary Orbit Using the Short Wavelength Side of the Mid-Infrared Water Vapor Absorption Band." *Earth and Space Science* 9 (2022). <https://doi.org/10.1029/2021EA002080>.
- Palmer, R., D. Whelan, D. Bodine, P. Kirstetter, M. Kumjian, J. Metcalf, M. Yeary, et al. "The Need for Spectrum and the Impact on Weather Observations." *Bulletin of the American Meteorological Society* 102 (2021). <https://doi.org/10.1175/BAMS-D-21-0009.1>.
- Schmit, Timothy J., Jun Li, Su Jeong Lee, Zhenglong Li, Richard Dworak, Yong-keun Lee, Michael Bowlan, et al. "Legacy Atmospheric Profiles and Derived Products From GOES-16: Validation and Applications." *Earth and Space Science* 6 (September 2019): 1730–48. <https://doi.org/10.1029/2019EA000729>.
- Schmit, Timothy J., Scott S. Lindstrom, **Jordan J. Gerth**, and Mathew M. Gunshor. "Applications of the 16 Spectral Bands on the Advanced Baseline Imager (ABI)." *Journal of Operational Meteorology* 06 (June 2018): 33–46. <https://doi.org/10.15191/nwajom.2018.0604>.
- Wimmers, Anthony, Sarah Griffin, **Jordan Gerth**, Scott Bachmeier, and Scott Lindstrom. "Observations of Gravity Waves with High-Pass Filtering in the New Generation of Geostationary Imagers and Their Relation to Aircraft Turbulence." *Weather and Forecasting* 33 (February 2018): 139–44. <https://doi.org/10.1175/WAF-D-17-0080.1>.

### **Invited Panelist, Professional Conferences**

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#### *The Road to GeoXO*

AMS 102<sup>nd</sup> Annual Meeting, January 2022

#### *Spectrum Policy, 5G, and Environmental Satellites: A Risky Mix for the Earth Science Community?*

AGU Fall Meeting, December 2021

#### *Is Spectrum Shifting the Playing Field for the Weather Enterprise? Spectrum Considerations for Weather Satellite End Users*

Joint Satellite Conference, October 2019

#### *The Wizard Behind the Curtain?—The Important, Diverse, and Often Hidden Role of Spectrum Allocation for Current and Future Environmental Satellites and Water, Weather, and Climate*

AMS 99<sup>th</sup> Annual Meeting, January 2019

#### *Societal benefits of user-focused communication of satellite data, products and services, "Are we meeting user needs?"*

EUMETSAT Meteorological Satellite Conference, September 2013

## **Special Recognition**

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Monetary performance awards (e.g., Special Act Award) are not included here.

### **2022 – NWS Director’s Award**

For exceptional leadership and execution of tasks that will lead to harnessing cutting-edge satellite science and technology.

### **2022 – U.S. Department of Commerce Bronze Medal Award**

For ensuring that NOAA’s next generation geostationary satellite system will meet the most critical observing needs for our nation and partners. (With NOAA team)

### **2022 – NASA Group Achievement Award (to GeoXO Program Science Working Group)**

### **2021 – NESDIS Collaboration Award**

For demonstrating excellent collaboration across multiple thematic communities (Fire, Agriculture, Human Health, Weather Forecasting, and Oceans), and for holding five workshops where user needs were collected and translated into requirements for GeoXO instrument selection. (With team)

### **2021 – U.S. Department of Commerce Bronze Medal Award**

For development and implementation of the GOES-17 Advanced Baseline Imager cooling timeline, thereby enabling its sole operation as GOES-West. (With NESDIS-NWS team)

### **2020 – NWS Isaac M. Cline Award for Program Management/Administration - Region/Office**

For expertly organizing and executing the first-ever Office of Observations Annual Operating Plan meeting in a virtual environment. (With NWS team)

### **2019 – National Weather Association Larry R. Johnson Award**

For outstanding efforts in educating operational meteorologists on the uses and benefits of the new GOES series of satellites. (With colleague Scott Lindstrom)

## **Professional Leadership and Organization Membership**

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**American Geophysical Union (AGU)**, Member since 2018

**American Meteorological Society (AMS)**, Member since 2003

- Committee on Radio Frequency Allocations  
Chair (2018 to Present), Member (2016 through 2017)
- Board on Enterprise Communication  
Future Chair (2024), Member (2017 to Present)
- Committee on Satellite Meteorology, Oceanography, and Climatology  
2009 to Present

**National Weather Association (NWA)**, Member since 2002

- Professional Development Committee, 2009 through 2014
- Strategic Planning Committee, 2014 through 2016

**SSEC Advisory Council**, 2018 and 2019, Elected by peers

## **Organizer or Planning Committee, Professional Conferences**

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- AMS Summer Community Meeting, 2017, 2021, 2022, and 2023
- NOAA Satellite Conference, 2017 and 2022
- AMS Satellite Meteorology, Oceanography, and Climatology Conference, 2016, 2019, and 2022 (Program Chair)
- NWA 37<sup>th</sup> Annual Meeting, 2012 (Program Chair)

## **Professional Conference Presentations**

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For select presentations, visit <http://cimss.ssec.wisc.edu/~jordang/overflow.html>

## **Professional Specialties and Other Experience**

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My specialties include satellite meteorology, satellite data acquisition, research to operations, operational meteorology, and meteorological systems engineering. I have

- participated on NASA, NOAA, and National Science Foundation (NSF) review panels of research proposals, satellite missions, and organizations;
- served as a peer reviewer of manuscripts intended for publication in scientific journals;
- contributed to the development and execution of AMS and NWS short courses;
- published an essay on wireless frequency sharing in AGU's *Eos* (2018);
- designed components of numerical weather prediction models, implemented applicable numerical techniques, including optimization, and utilized the Weather Research and Forecast (WRF) model framework in research projects;
- expertise in manipulating and writing data in scientific storage formats; and
- used, developed, and enhanced atmospheric science software applications.

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