



2024 Space Weather Workshop Agenda

Times in MDT

Monday, April 15 - Pre-Workshop Events

- | | |
|----------------------------|--|
| 8:00 AM – 10:00 AM | User Readiness for Space Weather Data from NOAA Program of Record-2025 Missions
Location: Pearl St. Ballroom LEFT “Walnut” and CENTER “Mall” |
| 10:00 AM - 12:00 PM | Coordination Group for Meteorological Satellites (CGMS) Data Access
Location: Pearl St. Ballroom LEFT “Walnut” and CENTER “Mall” |
| 10:00 AM - 12:00 PM | DoD Space Weather Enterprise (by invitation only)
Location: Pearl St. Ballroom RIGHT “East-West” |
| 1:00 PM - 5:00 PM | NOAA Space Weather Scales
Location: Pearl St. Ballroom |
| 3:00 PM - 5:00 PM | Student Program (for students and invited participants)
Location: “Royal Arch” Meeting Room
Organizers: Vincent Ledvina (University of Alaska)
Bhagyashree Waghule (University of Colorado) |
| 5:30 PM - 7:30 PM | Networking Session for Registered Space Weather Workshop Participants
Location: NCAR Mesa Lab – Limited round-trip transportation between Embassy Suites and Mesa Lab will be provided and is on a first come/first serve basis. |

Tuesday, April 16

Location: Pearl St. Ballroom

- 8:30 AM - 8:40 AM** **Opening Remarks and Welcome**
Bill Murtagh, NOAA SWPC
- 8:40 AM - 9:00 AM** **Space Weather Events and Impacts - Year in Review**
Rachel Broemmelsiek, USAF 557th Weather Wing, 2d Weather Squadron (557 WW/2 WS)
Shawn Dahl, NOAA Space Weather Prediction Center (SWPC)
Maj Benjamin Pearson, USAF 557 WW/2 WS
- 9:00 AM - 9:35 AM** **National Policy Initiatives**
Co-Chairs: Genene Fisher, NASA HQ
Bill Murtagh, NOAA SWPC
- 9:00 AM - 9:05 AM** **Overview and Introductions**
Bill Murtagh, NOAA SWPC
- 9:05 AM - 9:15 AM** **Perspective from House Science Committee**
Brent Blevins, U.S. House Committee on Science, Space, and Technology
- 9:15 AM - 9:25 AM** **Perspective from the Office of Science and Technology Policy (OSTP)**
Jinni Meehan, OSTP
- 9:25 AM - 9:35 AM** **Panel & Audience Discussion**
- 9:35 AM - 9:50 AM** **Special Presentation: UK Science Policy**
Sarah Beardsley, UK Science and Technologies Facilities Council
- 9:50 AM - 10:45 AM** **Break and Poster Session: Solar and Interplanetary Research and Applications; and Aviation Radiation Research and Applications**
- 10:45 AM - 11:45 AM** **PROSWIFT User Survey - Space Weather Advisory Group**
Co-Chairs: Tammy Dickinson, Science Matters Consulting
Amy Macpherson, NWS HQ
- 10:45 AM - 10:55 AM** **Overview of PROSWIFT User-Survey Initiative**
Tammy Dickinson, Science Matters Consulting
- 10:55 AM - 11:00 AM** **Emergency Management**
Seth Jonas, Lockheed Martin
- 11:00 AM - 11:05 AM** **Space Traffic Management/Coordination**
Delores Knipp, University of Colorado, Boulder
- 11:05 AM - 11:10 AM** **Electric Power**
Mark Olson, North American Electric Reliability Corporation (NERC)

- 11:10 AM - 11:20 AM Human Spaceflight and Aviation**
Kent Tobiska, Space Environment Technologies
- 11:20 AM - 11:25 AM Research**
Scott McIntosh, National Center for Atmospheric Research (NCAR)
- 11:25 AM - 11:45 AM Panel & Audience Discussion**
- 11:45 AM - 12:15 PM Poster Lightning Talks for Tuesday Posters: Solar and Interplanetary Research and Applications; and Aviation Radiation Research and Applications**
Chair: Eric Adamson, NOAA SWPC
- Far-Side Active Regions Based on Helioseismic and EUV Measurements: Toward a Global Index**
Amr Hamada, National Solar Observatory
- Identifying solar flare precursors in a forest of EUV signatures**
Larizza Krista, CU CIRES/NOAA NCEI
- QuickPUNCH: Observations for Space Weather Operations and Research**
Daniel Seaton, Southwest Research Institute
- Examining the Accuracy of The OMNI Data in Representing ICME Observations Near Earth and the Effect on Global Modeling**
Epsen Fredrick, University of Texas at Arlington
- Towards Predictive Uncertainty Quantification in Space Weather Simulations Through Surrogate Models for Dynamical Systems**
Aniket Jivani, University of Michigan
- Deep Learning-Based Analysis of Near-Real-time single-viewpoint Coronagraph Images using Neural Networks.**
Harshita Gandhi, Aberystwyth University
- Statistical Relationships Between Solar Wind Parameters: Implications for Space Weather Forecasts**
Heather Elliott, Southwest Research Institute
- Assessment of Vulnerability of U.S. National Airspace System to Space Weather**
Michael Cook, The MITRE Corporation
- 12:15 PM - 1:30 PM Lunch**
- 12:30 PM - 2:15 PM SWPC Tour (for those pre-registered for the tour)**
- 1:30 PM - 2:30 PM Building Resilience to Geomagnetic Storms in the U.S. and Canadian Power Grid**
Co-Chairs: Jenn Gannon, Computational Physics, Inc.
Jordan Guerra, CU CIRES/NOAA SWPC
- 1:30 PM - 1:35 PM Overview and Introductions**
Jordan Guerra, CU CIRES/NOAA SWPC
- 1:35 PM - 1:43 PM Recent Developments at DOE to address GMD**
Joe Blankenburg, Department of Energy

- 1:43 PM - 1:51 PM** **Completion of the MT Survey and its Contribution to Geoelectric Field Calculations**
Adam Schultz, Oregon State University
- 1:51 PM - 1:59 PM** **Understanding the Impact of Space Weather on the Power Grid with Geoelectric Field Modeling**
Christopher Balch, CU CIRES/NOAA SWPC
- 1:59 PM - 2:07 PM** **UK Government & Industry Activities to Support Electricity Resilience**
Abigail Clark, Department for Energy Security and Net Zero
- 2:07 PM - 2:15 PM** **NERC Geomagnetically Induced Currents Database**
Donna Pratt, North American Electric Reliability Corporation (NERC)
- 2:15 PM - 2:30 PM** **Q&A**
- 2:30 PM - 2:45 PM** **Special Presentation: Lessons from Department-Level Exercise at USDA**
Dionne Mendoza, U.S. Department of Agriculture (USDA)
- 2:45 PM - 3:45 PM** **Break and Poster Session: Solar and Interplanetary Research and Applications; and Aviation Radiation Research and Applications**
- 3:45 PM - 5:00 PM** **Space Weather Services in Support of Aviation Operations**
Co-Chairs: Sam Carlson, Federal Aviation Administration (FAA)
Brent Gordon, NOAA SWPC
- 3:45 PM - 3:50 PM** **Overview and Introductions**
Brent Gordon, NOAA SWPC
- 3:50 PM - 3:58 PM** **Nowcast of Aerospace Ionizing Radiation System (NAIRAS) Model**
Chris Mertens, NASA
- 3:58 PM - 4:06 PM** **Using REACH data in Support of Aviation**
Kerry Lee, The Aerospace Corporation
- 4:06 PM - 4:14 PM** **Aeronautical Regional Geospatial Observer System (ARGOS) Stratospheric Drone Flight Test for Use in Aviation Radiation Measurements**
Justin Bailey, Space Environment Technologies
- 4:14 PM - 4:22 PM** **Space Weather - Delta Air Lines Perspective**
Stephanie Klipfel, Delta Air Lines
Chris Schwartz, Delta Air Lines
- 4:22 PM - 4:30 PM** **Space Weather: Meeting the Needs for Global Aviation Services**
Rondeau Flynn, Allied Pilots Association
- 4:30 PM - 5:00 PM** **Q&A**

- 5:00 PM - 5:30 PM** **Poster Lightning Talks for Wednesday Posters: Ionosphere and Thermosphere Research and Applications**
 Chair: Simon Machin, UK Meteorological Office
- AI-Based Ionospheric Scintillation Impact Prediction**
 Ryan Kelly, Orion Space Solutions
- Deep Learning-Based Solar Irradiance Prediction Model using the FISM2 Dataset During the Solar Flare Events**
 Jeong-Heon Kim, Korea Astronomy and Space Science Institute
- Space Weather Ionospheric Network Canada**
 Chris Watson, University of New Brunswick
- Geospace Dynamics Constellation: The Mission We Need for the New Era of Access to LEO**
 Katherine Garcia-Sage, NASA Goddard Space Flight Center
- Leveraging Data Assimilative Models for Enhanced Satellite Drag Predictions**
 Martin Pilinski, University of Colorado, Boulder
- Assessing the Relationship Between the Quasi-biennial Oscillation and D-region Electron Density**
 Natalie Wirth, Air Force Institute of Technology
- Agile Collaboration: Citizen Science as a Transdisciplinary Approach to Heliophysics**
 Vincent Ledvina, University of Alaska

Wednesday, April 17 Location: Pearl St. Ballroom

- 8:15 AM - 8:30 AM** **Today's Space Weather Forecast + Q&A**
 Shawn Dahl, NOAA SWPC
 Rachel Broemmelsiek, USAF 557th Weather Wing, 2d Weather Squadron (557 WW/2 WS)
- 8:30 AM - 10:05 AM** **The 2023 Space Weather Implementation Plan - Path to Execution**
 Co-Chairs: Clinton Wallace, NOAA SWPC
 LT Bryan Brasher, NOAA Corps/SWPC
- 8:30 AM - 8:35 AM** **Overview and Introductions**
 Clinton Wallace, NOAA SWPC
- 8:35 AM - 8:45 AM** **Building a Space Weather Ready Nation**
 Ken Graham, Director, NOAA National Weather Service (NWS)
- 8:45 AM - 8:55 AM** **Space Weather Observations in Support of an Operational Space Weather Capability**
 Elsayed Talaat, Director Office of Space Weather Observations, NOAA National Environmental Satellite, Data, and Information Service (NESDIS)
- 8:55 AM - 9:05 AM** **National Aeronautics and Space Administration (NASA)**
 Peg Luce, Deputy Director, NASA Heliophysics Division, NASA HQ

- 9:05 AM - 9:15 AM** **NSF Support for Space Weather Research, Observations, and Workforce Development**
Anne Johansen, Director, Division of Atmospheric and Geospace Sciences, NSF
Mangala Sharma, Geospace Cluster Coordinator, Division of Atmospheric and Geospace Sciences, NSF
- 9:15 AM - 9:25 AM** **2023 Space Weather Implementation – USSF’s Path to Execution**
Col Marc Brock, Director of Combat Power, HQ Space Operations Command, U.S. Space Force (USSF)
- 9:25 AM - 9:35 AM** **The Role of the US Geological Survey in Space Weather Monitoring and Hazard Characterization**
Gavin Hayes, Senior Science Advisor for Earthquake and Geologic Hazards, USGS
- 9:35 AM - 9:45 AM** **Implementation through the Commercial Marketplace**
Jenn Gannon, Vice President of R&D, Computational Physics, Inc.
- 9:45 AM - 10:05 AM** **Q&A**
- 10:05 AM - 10:55 AM** **Break and Poster Session: Ionosphere and Thermosphere Research and Applications**
- 10:55 AM - 12:00 PM** **Improving Space Weather Services for Satellite Operations**
Co-chairs: Jennifer Benson, USAF 557th Weather Wing, 2d Weather Squadron (557 WW/2 WS)
Janet Green, Space Hazard Applications
- 10:55 AM - 10:58 AM** **Overview and Introductions**
Jennifer Benson, USAF 557th Weather Wing, 2d Weather Squadron (557 WW/2 WS)
- 10:58 AM - 11:06 AM** **Recap of the 2023 Satellite Environment Testbed Exercise**
Tzu-Wei Fang, NOAA SWPC
- 11:06 AM - 11:14 AM** **What is the Space Information Sharing and Analysis Center (Space ISAC)?**
Hector Falcon, Space Information Sharing and Analysis Center (Space ISAC)
- 11:14 AM - 11:22 AM** **Amazon Project Kuiper**
Marco Concha, Amazon
Inkwan Park, Amazon
- 11:22 AM - 11:30 AM** **Maxar On-Orbit Operations and Future Needs**
Catherine Keys, Maxar Space Systems
- 11:30 AM - 11:38 AM** **The Spacecraft Anomaly Resolution Knowledgebase (SPARK) and Machine Intelligence for Space Weather (MINTS)**
Alec Engell, NextGEN Federal Systems
- 11:38 AM - 11:46 AM** **Thermospheric Forecasting for LEO Satellites**
Ben McCrossan, Ensemble

- 11:46 AM - 12:00 PM Q&A**
- 12:00 PM - 1:30 PM Lunch and Other Activities:
18th Annual NOAA-ACSWA Summit Meeting- invitation only**
Location: “Baseline” Boardroom
- Student Speed Mentoring Lunch (for students and invited participants)**
Location: “Royal Arch” Meeting Room
Organizers: Vincent Ledvina (University of Alaska)
Bhagyashree Waghule (University of Colorado)
- 1:30 PM - 2:30 PM Space Weather Support for Human Habitation on the Moon and Beyond**
Co-Chairs: Eddie Semones, NASA Space Radiation Analysis Group (SRAG)
Robert Steenburgh, NOAA SWPC
- 1:30 PM - 1:35 PM Overview and Introductions**
Robert Steenburgh, NOAA SWPC
- 1:35 PM - 1:43 PM NOAA SWPC Preparations for Artemis**
Hazel Bain, CU CIRES/NOAA SWPC
- 1:43 PM - 1:51 PM Space Radiation Analysis Group - Flight Rules for Operations**
Steve Johnson, NASA Space Radiation Analysis Group (SRAG)
- 1:51 PM - 1:59 PM Space Weather Support for Human Exploration: NASA Moon-to-Mars (M2M)**
Carina Alden, NASA Goddard Space Flight Center, Moon-to-Mars Space Weather
Analysis Office
- 1:59 PM - 2:07 PM Analyzing Space Weather at Mars with MAVEN**
Gina DiBraccio, NASA Goddard Space Flight Center, Heliophysics Science
Division
- 2:07 PM - 2:15 PM Space Weather Opportunities and Needs in NASA’s Moon to Mars Exploration
Architecture**
Jamie Favors, NASA HQ, Heliophysics Division
- 2:15 PM - 2:30 PM Q&A**
- 2:30 PM - 3:20 PM Break and Poster Session: Ionosphere and Thermosphere Research and
Applications**
- 3:20 PM - 4:05 PM Observing and Modeling the Ionosphere: Supporting Communications and
Navigation**
Co-Chairs: Tim Fuller-Rowell, CU CIRES/NOAA SWPC
Jim Spann, NOAA NESDIS
- 3:20 PM - 3:25 PM Overview and Introductions**
Tim Fuller-Rowell, CU CIRES/NOAA SWPC

- 3:25 PM - 3:33 PM** **New GDGPS Products for High-Precision Real-Time GNSS Applications to Support Public and Scientific Users**
Attila Komjathy, NASA Jet Propulsion Laboratory
- 3:33 PM - 3:41 PM** **Ionosphere TEC and Scintillation Observations Using Spaceborne GNSS Reflectometry**
Brian Breitsch, University Colorado, Boulder
- 3:41 PM - 3:49 PM** **Using GNSS receivers on SmallSat Platforms for Ionospheric Specification**
Rebecca Bishop, The Aerospace Corporation
- 3:49 PM - 4:05 PM** **Q&A**
- 4:05 PM - 4:45 PM** **Space Weather Workforce Development**
Co-Chairs: Mark Miesch, CU CIRES/NOAA SWPC
Dan Welling, University of Michigan
- 4:05 PM - 4:10 PM** **Overview and Introductions**
Dan Welling, University of Michigan
- 4:10 PM - 4:18 PM** **GlobalMindED - Creating a Capable, Diverse Talent Pipeline**
Brian Ysasaga, Lockheed Martin and GlobalMindED
- 4:18 PM - 4:26 PM** **Space Weather for a Sustainable Future - Thoughts of a UNOOSA Space4Women Mentor**
Alessandra Pacini, NOAA National Centers for Environmental Information (NCEI)
- 4:26 PM - 4:34 PM** **Toward Space Weather Curriculum for High School Physics: Building a Three-Dimensional Unit Storyline aligned with Next-Generation Science Standards**
Erin Furtak, University of Colorado, Boulder
- 4:34 PM - 4:45 PM** **Q&A**
- 4:45 PM - 5:00 PM** **Special Presentation: Space Weather - Perspective of the Department of Homeland Security**
Mona Harrington, Assistant Director for the National Risk Management Center (NRMC)
- 5:00 PM - 5:30 PM** **Poster Lightning Talks for Thursday Posters: Geospace/Magnetosphere Research and Applications; Space Weather Policy and General Space Weather Contributions**
Chair: Aspen Davis, CU CIRES/NCEI
- Estimating the Impact of the Magnetometer Network on the SWPC Geoelectric Field Model**
Jordan Guerra, CU CIRES/NOAA SWPC
- Revamping Models of Energetic Electron Precipitation Based on Realistic NOAA/POES Response Functions**
Weichao Tu, West Virginia University

Global Geomagnetic Perturbation Forecasting with Quantified Uncertainty Using Deep Gaussian Process

Hongfan Chen, University of Michigan

Multi-model Ensemble Forecasts of Ground Magnetic Perturbations

Kathryn Wilbanks, University of Michigan

Towards An Australian Centre of Excellence in Space Weather

Iver Cairns, University of Sydney

I-ALiRT System for Forecasting Space Weather

Laura Sandoval, Laboratory for Atmospheric and Space Physics

Automatically Labelled EUV and X-Ray Incident Solarflare Catalog

Jorge Padial, Vanderbilt University

7:00 PM - 9:00 PM

Banquet and After-dinner Presentation:

Human Space Exploration & Space Weather Effects

Speaker: Tonya Ladwig, Vice President, Human Space Exploration and Orion Program Manager, Lockheed Martin Space

Thursday, April 18

Location: Pearl St. Ballroom

8:30 AM - 9:45 AM

Centers Advancing Research to Operations

Co-Chairs: Michele Cash, NOAA SWPC

Genevieve Fisher, NASA HQ

8:30 AM - 8:35 AM

Overview and Introductions

Genevieve Fisher, NASA HQ

8:35 AM - 8:45 AM

CLEAR: Center for All-Clear SEP Forecast

Lulu Zhao, University of Michigan

8:45 AM - 8:55 AM

Space Weather Research and Technology Applications (SPARTA) Center of Excellence

Keith Groves, Boston College

8:55 AM - 9:05 AM

Space Weather Operational Readiness Development (SWORD) Center

Thomas Berger, University of Colorado, Boulder

9:05 AM - 9:15 AM

Center of Excellence for Advanced Forecasting of Drag for Enhanced, Sustainable, and Conscientious Space Operations

Piyush Mehta, West Virginia University

9:15 AM - 9:25 AM

Center for Geospace Storms

Mike Wiltberger, National Center for Atmospheric Research, High Altitude Observatory

9:25 AM - 9:45 AM

Q&A

9:45 AM - 10:45 AM

Break and Poster Session: Geospace/Magnetosphere Research and Applications; Space Weather Policy and General Space Weather Contributions

- 10:45 AM - 11:00 AM** **Special Presentation: Upcoming Space Weather Tabletop Exercise at APL**
Ian Cohen, Johns Hopkins University Applied Physics Laboratory (APL)
- 11:00 AM - 12:10 PM** **Space Weather Research to Operations: NSF-NASA Space Weather with Quantified Uncertainties (SWQU)**
Co-Chairs: Jamie Favors, NASA HQ
Mangala Sharma, NSF
- 11:00 AM - 11:05 AM** **Overview and Introductions**
Mangala Sharma, NSF
- 11:05 AM - 11:15 AM** **Improving Space Weather Predictions with Data-Driven Models of the Solar Atmosphere and Inner Heliosphere**
Nikolai Pogorelov, University of Alabama in Huntsville
- 11:15 AM - 11:25 AM** **NextGen Space Weather Modeling Framework Using Data, Physics and Uncertainty Quantification**
Xun Huan, University of Michigan
- 11:25 AM - 11:35 AM** **A Flexible Community-based Upper Atmosphere Ensemble Prediction System**
Aaron Ridley, University of Michigan
- 11:35 AM - 11:45 AM** **Forecasting Small-Scale Plasma Structures in the Earth's Ionosphere-Thermosphere System**
Tim Fuller-Rowell, CU CIRES/NOAA SWPC
- 11:45 AM - 11:55 AM** **Ensemble Learning for Accurate and Reliable Uncertainty Quantification**
Rebecca Morrison, University of Colorado, Boulder
- 11:55 AM - 12:10 PM** **Q&A**
- 12:10 PM - 1:30 PM** **Lunch**
- 12:30 PM - 2:15 PM** **SWPC Tour (for those pre-registered for the tour)**
- 1:30 PM - 2:30 PM** **Space Weather: New and Future Observations and Data Access to Advance Understanding and Forecasting**
Co-Chairs: Carrie Black, NSF
Erin Lynch, NOAA NESDIS
- 1:30 PM - 1:35 PM** **Overview and Introductions**
Erin Lynch, NOAA NESDIS
- 1:35 PM - 1:43 PM** **GONG and ngGONG Status**
Alexei Pevtsov, National Solar Observatory
- 1:43 PM - 1:51 PM** **I-ALiRT (IMAP Active Link for Real-Time)**
David McComas, Princeton University

- 1:51 PM - 1:59 PM** **Owens Valley Radio Observatory Long Wavelength Array (OVRO-LWA) and the 14 December Radio Event**
Dale Gary, New Jersey Institute of Technology
- 1:59 PM - 2:08 PM** **Overview of NOAA Space Weather Products at the NCEI**
Laurel Rachmeler, NOAA National Centers for Environmental Information (NCEI)
- 2:08 PM - 2:16 PM** **Future Solar Magnetograph Observations from Space**
Neal Hurlburt, Lockheed Martin
- 2:16 PM - 2:30 PM** **Q&A**
- 2:30 PM - 3:30 PM** **Break and Poster Session: Geospace/Magnetosphere Research and Applications; Space Weather Policy and General Space Weather Contributions**
- 3:30 PM - 4:30 PM** **Advances in Space Weather Modeling, Observations and Services - I**
Co-Chairs: Maj Austin Gibbons, USAF/NOAA SWPC
Howard Singer, NOAA SWPC
- 3:30 PM - 3:35 PM** **Overview and Introductions**
Howard Singer, NOAA SWPC
- 3:35 PM - 3:43 PM** **The Community Coordinated Modeling Center Role in Advancing the R2O Pipeline**
Masha Kuznetsova, NASA
- 3:43 PM - 3:51 PM** **Space Weather Support for the James Webb Space Telescope Launch**
Joseph Minow, NASA
- 3:51 PM - 3:59 PM** **SWIMMR Results**
Ian McCrea, UK Science and Technologies Facilities Council
- 3:59 PM - 4:07 PM** **Space Weather Advances within ESA's Space Safety Programme**
Alexi Glover, European Space Agency (ESA)
- 4:07 PM - 4:15 PM** **Korean Space Weather Center (KSWC)**
Kichang Yoon, KSWC
- 4:15 PM - 4:30 PM** **Q&A**
- 4:30 PM - 5:30 PM** **Advances in Space Weather Modeling, Observations and Services - II**
Co-Chairs: Janet Barzilla, Leidos/NASA Space Radiation Analysis Group
Charlotte Martinkus, CU CIRES/SWPC
- 4:30 PM - 4:35 PM** **Overview and Introductions**
Janet Barzilla, Leidos/NASA Space Radiation Analysis Group
- 4:35 PM - 4:45 PM** **Global High-Resolution MHD Simulations of Interplanetary CMEs and their Geoeffective Properties**
Elena Provornikova, Johns Hopkins University Applied Physics Laboratory

- 4:45 PM - 4:55 PM** **Creating an SEP Forecast for Cislunar Space**
Wally Lang, Ensemble
- 4:55 PM - 5:05 PM** **Space Charging Environment in Cislunar Space and Impacts to Gateway**
Linda Parker, Space Weather Solutions
- 5:05 PM - 5:15 PM** **Solar Cycle of Radiation Measurements on the Surface of Mars**
Don Hassler, Southwest Research Institute
- 5:15 PM - 5:30 PM** **Q&A**

Friday, April 19 Location: Pearl St. Ballroom

- 8:30 AM - 10:00 AM** **Space Weather Innovation Projects**
Co-Chairs: Irfan Azeem, NOAA NESDIS
Nai-Yu Wang, NOAA NESDIS
- 8:30 AM - 8:35 AM** **Overview and Introductions**
Nai-Yu Wang, NOAA NESDIS
- 8:35 AM - 8:45 AM** **TRITON: Tiny Remote-sensing Instrument for the Thermospheric Oxygen and Nitrogen**
Bruce Fritz, U.S. Naval Research Laboratory
- 8:45 AM - 8:55 AM** **Using Commercial Satellite Constellation Data to Drive Thermospheric Density Forecast Capabilities**
Eric Sutton, University of Colorado Space Weather Technology, Research, and Education Center (SWxTREC)
- 8:55 AM - 9:05 AM** **Solar Sail Fabrication for Solar Cruiser Project**
Pat Mulligan, The MITRE Corporation
- 9:05 AM - 9:15 AM** **Compact Vector Helium magnetometer (CVHM) Development**
Paul Loto'aniu, CU CIRES/NOAA NCEI
- 9:15 AM - 9:25 AM** **AI, Data and Their Application to SW Forecasting**
Madhulika Guhathakurta, NASA HQ
- 9:25 AM - 9:35 AM** **Space Weather Array Prompt Experiment (SWAP-E) Cubesat Constellation**
Hank Voss, NearSpace Launch, Inc.
- 9:35 AM - 10:00 AM** **Q&A**
- 10:00 AM - 10:20 AM** **Break**

- 10:20 AM - 10:50 AM** **Induced Current Susceptibility and Resilience**
 Co-Chairs: Mike Hartinger, Space Science Institute
 Bhagyashree Waghule, University of Colorado, SWx TREC
- 10:20 AM - 10:23 AM** **Overview and Introductions**
 Bhagyashree Waghule, University of Colorado, SWx TREC
- 10:23 AM - 10:31 AM** **Geomagnetic Induction in Submarine Cables**
 David Boteler, Natural Resources Canada
- 10:31 AM - 10:39 AM** **Space Weather Modeling for the Solar Tsunamis Project**
 Pauline Dredger, University of Michigan
- 10:39 AM - 10:47 AM** **Mapping Magnetic Superstorms**
 Jeffrey Love, U.S. Geological Survey (USGS)
- 10:47 AM - 10:55 AM** **Q&A**
- 10:55 AM - 11:50 AM** **Citizens & Scientists: Tackling Space Weather Together**
 Co-Chairs: Mike Cook, The MITRE Corporation
 Vincent Ledvina, University of Alaska, Fairbanks
- 10:50 AM - 10:58 AM** **Overview and Introductions**
 Mike Cook, The MITRE Corporation
- 10:58 AM - 11:08 AM** **Aurora Apps: The Good, The Bad, and The Ugly**
 Tanya Melnik, Upper Midwest Aurora Chasers
- 11:08 AM - 11:18 AM** **Communicating Space Weather to the Non-Expert and the Public**
 Tamitha Skov, Millersville University
- 11:18 AM - 11:28 AM** **Innovative solutions to meet the space weather challenge: EZIE, EZIE-Mag, SuperMAG**
 Jesper Gjerloev, Johns Hopkins University Applied Physics Laboratory
- 11:28 AM - 11:38 AM** **Special Presentation - Solar Cycle Prediction**
 Mark Miesch, CU CIRES/NOAA SWPC
- 11:38 AM - 11:50 AM** **Q&A**
- Meeting Conclusion**
- 11:50 AM - 12:00 PM** **Closing Remarks**
 Howard Singer, NOAA SWPC