



## 2025 Space Weather Workshop Agenda

Theme: *Guiding the Future: Integrating Heliophysics Insights and User Needs*

### *Times in MDT*

---

#### Monday, March 17 - Pre-Workshop Events

---

- 9:00 AM – 12:00 PM**     **R2O2R**  
Location: Pearl St. Ballroom LEFT “Walnut” and CENTER “Mall”
- 10:00 AM - 12:00 PM**     **CGMS-ISES Coordination Meeting (by invitation only)**  
Location: “Foothills” Meeting Room
- 11:00 AM – 12:00 PM**     **NSF NCAR's Earth System Predictability Across Timescales (ESPAT)**  
**Initiative: Collaborate with us on Advancing Space Weather Predictability**  
Location: Pearl St. Ballroom RIGHT “East-West”
- 1:00 PM - 3:00 PM**     **DoD Space Weather Enterprise (by invitation only)**  
Location: Pearl St. Ballroom RIGHT “East-West”
- 1:00 PM - 5:00 PM**     **ISES Annual Meeting (by invitation only)**  
Location: Location: “Foothills” Meeting Room
- 1:00 PM - 5:00 PM**     **NOAA Space Weather Scales**  
Location: Pearl St. Ballroom LEFT “Walnut” and CENTER “Mall”
- 3:00 PM - 5:00 PM**     **Student Program (for students and invited participants)**  
Location: “Royal Arch” Meeting Room
- 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 on a first come/first serve basis.

---

#### Tuesday, March 18

---

Location: Pearl St. Ballroom

---

- 8:30 AM - 8:45 AM**     **Opening Remarks and Welcome**  
Clinton Wallace, NOAA Space Weather Prediction Center (SWPC)  
Howard Singer, NOAA SWPC

- 8:45 AM - 9:00 AM**      **Space Weather Events and Impacts - Year in Review**  
Sara Housseal, USAF 557th Weather Wing, 2d Weather Squadron (557  
WW/2 WS)  
John Ross (557 WW/2WS)  
Shawn Dahl, NOAA SWPC
- 9:00 AM - 9:45 AM**      **Heliophysics Decadal Survey: Building on Past Accomplishments and Setting  
Future Priorities**  
Co-Chairs: Howard Singer, NOAA SWPC  
Linda Parker, Space Weather Solutions
- 9:00 AM - 9:05 AM**      **Session Overview and Introductions**  
Howard Singer, NOAA SWPC
- 9:05 AM - 9:15 AM**      **Charting the Future: An Overview of the National Academy of Sciences (NAS)  
Heliophysics Decadal Survey**  
Robyn Millan, Dartmouth College  
Stephen Fuselier, Southwest Research Institute (SwRI)
- 9:15 AM - 9:25 AM**      **Decadal Survey: Panel on Space Weather Science and Applications**  
Christina Cohen, California Institute of Technology  
Paul O'Brien, The Aerospace Corporation
- 9:25 AM - 9:35 AM**      **Decadal Survey: Panel on the State of the Profession: A Vision for a People-  
Centered Solar and Space Physics (Heliophysics) Community**  
Mark Moldwin, University of Michigan
- 9:35 AM - 9:45 AM**      **Panel & Audience Discussion**
- 9:45 AM - 9:55 AM**      **Special Presentation: Release of User Engagement Report on NOAA Space  
Weather Scales Revision**  
Asha Balakrishnan, Science and Technology Policy Institute (STPI)  
Kate Ross, STPI
- 9:55 AM - 10:45 AM**      **Break and Poster Session: Solar and Interplanetary Research and Applications**
- 10:45 AM - 11:00 AM**      **Special Presentation: Space Weather Advisory Group (SWAG) Results of the  
First National Survey of User Needs for Space Weather**  
Tammy Dickinson, Science Matters Consulting
- 11:00 AM - 12:05 AM**      **Building Resilience: Agency and Industry Approaches to Space Weather Policy  
Implementation**  
Co-Chairs: Tammy Dickinson, Science Matters Consulting  
Janet Green, The Aerospace Corporation
- 11:00 AM - 11:05 AM**      **Session Overview and Introductions**  
Tammy Dickinson, Science Matters Consulting
- 11:05 AM - 11:15 AM**      **Addressing the Space Weather Advisory Group's User Needs and Decadal  
Survey: NWS Response and Actions**  
Ken Graham, National Weather Service (NWS)

- 11:15 AM - 11:25 AM**    **Enhancing Space Weather Observations: NESDIS' Approach to User Needs and the Decadal Survey**  
Richard Ullman, Office of Space Weather Observations (SWO), NOAA National Environmental Satellite, Data, and Information Service (NESDIS)
- 11:25 AM - 11:35 AM**    **Advancing Space Weather Understanding: NASA Commitment to Implement User Needs and the Decadal Survey**  
Joe Westlake, NASA Heliophysics Division, NASA HQ
- 11:35 AM - 11:45 AM**    **Advancing Commercial Space Weather Capabilities: Industry's Response to the User Needs Document and the Decadal Survey**  
Geoff Crowley, American Commercial Space Weather Association (ACSWA)
- 11:45 AM - 12:05 AM**    **Panel & Audience Discussion**
- 12:05 PM - 1:30 PM**    **Lunch**
- 1:30 PM - 2:30 PM**    **Space Weather Storms and Their Impact on LEO Satellites: Protection, Preparedness, and Response**  
Co-Chairs: Delores Knipp, University of Colorado, Boulder  
Tzu-Wei Fang, NOAA SWPC
- 1:30 PM - 1:35 PM**    **Overview and Introductions**  
Delores Knipp, University of Colorado, Boulder (CU)
- 1:35 PM - 1:43 PM**    **Importance of Solar Cycle Prediction During Spacecraft Design**  
Scott Shambaugh, Leonid Space
- 1:43 PM - 1:51 PM**    **Space Weather Impacts on Satellite Conjunction Assessment and Space Safety**  
William Parker, Massachusetts Institute of Technology
- 1:51 PM - 1:59 PM**    **The UK National Space Operation Centre's Civil Space Protection Service**  
Harneet Kaur Sangha, UK Space Agency
- 1:59 PM - 2:07 PM**    **Space Domain Awareness in an Enhanced Drag Environment**  
Vishal Ray, Kayhan Space
- 2:07 PM - 2:15 PM**    **Next-Generation Probabilistic Drag Modeling Framework**  
Piyush Mehta, West Virginia University
- 2:15 PM - 2:30 PM**    **Panel & Audience Discussion**
- 2:30 PM - 2:45 PM**    **Special Presentation: The Essential Roles of Space Weather Prediction in Spacecraft Design, Mission Planning, and Operational Safety**  
Dan Oltrogge, Commercial Space Operations Center (COMSPOC)
- 2:45 PM - 3:15 PM**    **Poster Lightning Talks: Solar and Interplanetary Research and Applications**  
Chair: Jordan Guerra, CU CIRES

**Statistical Methods for Solar Cycle Forecasting: Application to Solar Cycle 25**

Daniel Brandt, Michigan Technological University

**The Mars Space Weather Collaboration**

Phillip Chamberlin, CU Laboratory for Atmospheric and Space Physics (LASP)

**Coronal Observations at Mauna Loa Solar Observatory (MLSO) and Their Relevance for Space Weather Research**

Giuliana de Toma, NCAR High Altitude Observatory (HAO)

**Improved GONG Far Side Helioseismic Maps – A Crucial Data Set for Space Weather Forecasting Models**

Kiran Jain, National Solar Observatory (NSO)

**Space Weather Follow On: Release of CCOR-1 Imagery and Readiness for the SWFO-L1 Launch**

Dimitrios Vassiliadis, NOAA NESDIS SWO

**Assessing the Impacts of Magnetogram Projection Effects on Solar Flare Forecasting and Extending the SWAN-SF Dataset**

Griffin Goodwin, Georgia State University

**From Research to Operations: The Success of H3lioViz in Space Weather Visualization**

Greg Lucas, CU LASP/Space Weather Technology, Research, and Education Center (SWxTREC)

**3:15 PM - 4:00 PM Break and Poster Session: Solar and Interplanetary Research and Applications**

**4:00 PM - 5:00 PM Navigating the Future: Space Weather Strategies for Medium Earth Orbit (MEO), Geosynchronous Orbit (GEO), and Beyond**

Co-Chairs: Jamie Favors, NASA HQ  
Juan Rodriguez, CU CIRES

**4:00 PM - 4:05 PM Overview and Introductions**

Jamie Favors, NASA HQ

**4:05 PM - 4:13 PM How Maxar/Power and Propulsion Element (PPE) Supports Space Science**

Casey Keys, Maxar Space Systems

**4:13 PM - 4:21 PM JEDI (Joint EUV Coronal Diagnostic Investigation) and the Vigil Mission at L5**

Donald M. Hassler, SwRI

**4:21 PM - 4:29 PM NESDIS SWO Strategies**

Irfan Azeem, NOAA NESDIS Office of Space Weather Observations (SWO)

**4:29 PM - 4:37 PM NASA Space Weather Program's Exploration Perspective**

Sabrina Savage, Heliophysics Science Division, NASA

**4:37 PM - 4:45 PM Exploring the May 20, 2024 Mars Radiation Storm**

Gina A. DiBraccio, Heliophysics Science Division, NASA

**4:45 PM - 5:00 PM Panel & Audience Discussion**

**5:00 PM - 5:15 PM Special Presentation: Polarimeter to Unify the Corona and Heliosphere (PUNCH)**

Craig DeForest, SwRI

- 5:15 PM - 5:45 PM**      **Poster Lightning Talks: Ionosphere and Thermosphere Research and Applications and Aviation Radiation Research and Applications**  
 Chair: Astrid Maute, CU CIRES
- Forecasting SEP Atmospheric and Space Radiation by Coupling UMASEP and NAIRAS Models**  
 Christopher Mertens, NASA Langley Research Center
- The Impact of Polar Cap Patches on Over-The-Horizon Radar Systems**  
 Katarzyna Beser, New Jersey Institute of Technology
- Remote Sensing of the Ionosphere from the Central Pacific**  
 Arianna Corry, University of Hawai'i at Mānoa
- ScintPi: Advancing Ground-based Observational Capabilities for Space Weather Monitoring and Studies**  
 Josemaria Gomez Socola, W.B. Hanson Center for Space Studies, University of Texas at Dallas
- Gravity Wave Zoo: Engaging Citizen Science to Analyze Atmospheric Gravity Wave Activity over Poker Flat, Alaska**  
 Tyler Karasinski, Arizona State University
- Low Earth Orbit Challenges During the 10-14 May 2024 'Gannon' Storm**  
 Delores Knipp, University of Colorado, Boulder
- Neutral Density and Satellite Drag Forecast Using Data Assimilative Models**  
 Marcin Pilinski, CU LASP

**Wednesday, March 19**      Location: Pearl St. Ballroom

- 8:15 AM - 8:30 AM**      **Today's Space Weather Forecast + Q&A**  
 Shawn Dahl, NOAA SWPC
- 8:30 AM - 10:00 AM**      **Beyond the Aurora: Safeguarding the Power Grid during the May 2024/Gannon Storm**  
 Co-Chairs: Mark Olson, North American Electric Reliability Corporation (NERC)  
 Chris Balch, CU CIRES
- 8:30 AM - 8:35 AM**      **Tribute to Jenn Gannon**  
 Jinni Meehan, NOAA NWS
- 8:35 AM - 8:45 AM**      **NERC Perspective and Session Overview and Introductions**  
 Mark Olson, NERC
- 8:45 AM - 9:05 AM**      **Geomagnetically Induced Current Research in New Zealand: R2O by Solar Tsunamis Team and The Gannon Storm Response**  
 Craig Rodger, University of Otago  
 Andrew Renton, Transpower New Zealand
- 9:05 AM - 9:15 AM**      **Solar Wind Input and its Effect on Geomagnetic Disturbance (GMD) Forecasting**  
 Pauline Dredger, University of Michigan

- 9:15 AM - 9:25 AM**      **Current State of Geomagnetic Disturbance (GMD) and Geomagnetically Induced Current (GIC) Modeling: An Overview of Magnetohydrodynamics (MHD) and Machine Learning (ML) Efforts**  
Banafsheh Ferdousi, Air Force Research Laboratory (AFRL)
- 9:25 AM - 9:35 AM**      **Geoelectric Field Model**  
Chris Balch, CU CIRES
- 9:35 AM - 10:00 AM**      **Panel & Audience Discussion**
- 10:00 AM - 10:15 AM**      **Special Presentation: Gauging National Preparedness for Space Weather Events – Findings from the May 2024 Tabletop Exercise**  
Ian Cohen, Johns Hopkins University Applied Physics Laboratory (APL)
- 10:15 AM - 11:00 AM**      **Break and Poster Session: Ionosphere and Thermosphere Research and Applications and Aviation Radiation Research and Applications and Geospace/Magnetosphere Research and Application**
- 11:00 AM - 12:10 PM**      **Space Weather Support for Artemis and Human Space Flight**  
Co-chairs: Kent Tobiska, Space Environment Technologies  
Mike Bettwy, NOAA SWPC
- 11:00 AM - 11:05 AM**      **Overview and Introductions**  
Kent Tobiska, Space Environment Technologies
- 11:05 AM - 11:15 AM**      **Space Radiation and Analysis Group (SRAG)**  
Steve Johnson, NASA SRAG
- 11:15 AM - 11:25 AM**      **Moon-to-Mars Space Weather Analysis Office (M2M SWAO)**  
Teresa Nieves-Chinchilla, NASA Goddard Space Flight Center
- 11:25 AM - 11:35 AM**      **SWO Observations in Support of Space Exploration**  
Yaireska “Yari” Collado-Vega, NOAA NESDIS SWO
- 11:35 AM - 11:45 AM**      **SWPC Support for Human Space Flight**  
Hazel Bain, CU CIRES
- 11:45 AM - 11:55 AM**      **Space Weather and Artemis: the View from a Spaceship Developer**  
Rob Chambers, Lockheed Martin
- 11:55 AM - 12:10 PM**      **Panel & Audience Discussion**
- 12:10 PM - 1:30 PM**      **Lunch and Other Activities:**  
**Student Program (for students and invited participants)**  
Location: “Royal Arch” Meeting Room  
Organizers: Bhagyashree Waghule, University of Colorado  
Kathryn Wilbanks, University of Michigan

- 1:30 PM - 2:45 PM**      **Understanding and Mitigating Space Weather Impacts on Aviation**  
 Co-Chairs: Hazel Bain, CU CIRES  
 Kim Moreland, CU CIRES
- 1:30 PM - 1:35 PM**      **Overview and Introductions**  
 Hazel Bain, CU CIRES
- 1:35 PM - 1:45 PM**      **Ensuring Aviation Safety: The UK's Efforts to Prepare for Space Weather Impacts**  
 Simon Machin, UK Met Office
- 1:45 PM - 1:55 PM**      **Allied Pilots Association (APA) and American Airlines (AA)**  
 Rondeau Flynn, APA/AA Space Weather Team
- 1:55 PM - 2:05 PM**      **UK Radiation Measurements in Flight**  
 Ben Clewer, University of Surrey
- 2:05 PM - 2:15 PM**      **Release of NOAA GOES Alpha Particle and Heavy Ion Data**  
 Juan Rodriguez, CU CIRES
- 2:15 PM - 2:25 PM**      **A Novel Method to Define Space Weather Impacts to Aviation Using Real Time REACH (Responsive Environmental Assessment Commercial Hosting) Data**  
 Janet Green, The Aerospace Corporation
- 2:25 PM - 2:45 PM**      **Panel & Audience Discussion**
- 2:45 PM - 3:40 PM**      **Break and Poster Session: Ionosphere and Thermosphere Research and Applications and Aviation Radiation Research and Applications and Geospace/Magnetosphere Research and Application**
- 3:40 PM - 4:45 PM**      **The 2024 Space Weather User Needs - Other Sectors**  
 Co-Chairs: Holly Gilbert, National Center for Atmospheric Research (NCAR)  
 Rob Steenburgh, NOAA SWPC
- 3:40 PM - 3:45 PM**      **Overview and Introductions**  
 Rob Steenburgh, NOAA SWPC
- 3:45 PM - 3:55 PM**      **US Department of Defense (DoD) Arctic Space Weather Considerations**  
 Jerry Sanders, USSF
- 3:55 PM - 4:05 PM**      **Precision Agriculture**  
 Terry Griffin, Kansas State University
- 4:05 PM - 4:15 PM**      **GNSS Integration Throughout Society**  
 Rebecca Bishop, The Aerospace Corporation
- 4:15 PM - 4:25 PM**      **Local Emergency Management**  
 Essi Ellis, Amentum/DOE
- 4:25 PM - 4:45 PM**      **Panel & Audience Discussion**

- 4:45 PM - 5:00 PM**      **Special Presentation: Unveiling Space Weather Mysteries through Total Solar Eclipses**  
Shadia Habbal, University of Hawai‘i
- 5:00 PM - 5:30 PM**      **Poster Lightning Talks: Geospace/Magnetosphere Research and Applications and Space Weather Policy and General Space Weather Contributions**  
Chair: Anthony Rasca, CU CIRES
- Space Weather Timeline Viewer - Application to 2024's Active Space Weather Events**  
Elco Doornbos, Royal Netherlands Meteorological Institute (KNMI)
- Regional and Seasonal Effects of Geomagnetic Storms on Terrestrial Weather**  
Joachim Raeder, Space Science Center, University of New Hampshire
- Spectrographic Imagers for Space Weather Applications**  
Thomas J. Immel, University of California, Berkeley
- Space Weather Information and Aurora Chasers**  
Tanya Melnik, Millersville University
- Analysis of OMNI High-Speed Stream and Coronal Mass Ejection Propagation Reliability to Earth's Bow Shock**  
Espen Fredrick, University of Texas at Arlington
- Social Implementation of Space Weather Forecasting in NICT for Promotion of Private Sector Use**  
Naoto Nishizuka, National Institute of Information and Communications Technology (NICT), Japan
- Evaluating Geomagnetically Induced Current (GIC)-related Measurements and Model Predictions from the May 2024 Gannon Storm**  
Lucy Wilkerson, George Mason University
- Formulation of NOAA's Space Weather Next Program**  
Erin Lynch, NOAA NESDIS SWO
- 7:00 PM - 9:00 PM**      **Banquet and After-dinner Presentation:**  
**Charting New Frontiers: NASA's Parker Solar Probe Reaches Historic Milestone in Solar Exploration**  
Nour Rawafi, Johns Hopkins University Applied Physics Laboratory

---

**Thursday, March 20**      Location: Pearl St. Ballroom

---

- 8:30 AM - 9:45 AM**      **Observing, Modeling and Forecasting the Ionosphere: Supporting Communications and Navigation**  
Co-Chairs: Rebecca Bishop, The Aerospace Corporation  
Tim Fuller-Rowell, CU CIRES
- 8:30 AM - 8:35 AM**      **Overview and Introductions**  
Rebecca Bishop, The Aerospace Corporation



- 8:35 AM - 8:45 AM**      **Next-generation Ionosphere Model for Operations (NIMO) – Operational Status and Upcoming Enhancements**  
Sarah McDonald, Naval Research Laboratory (NRL)
- 8:45 AM - 8:55 AM**      **Google Research on Mapping the Ionosphere with Millions of Phones**  
Jamie Smith, Google
- 8:55 AM - 9:05 AM**      **An Update on SWPC's Ionosphere Products and Services**  
Tzu-Wei Fang, NOAA SWPC
- 9:05 AM - 9:15 AM**      **SPARTA: Specific Outputs Relevant to SWPC**  
Keith Groves, Boston College
- 9:15 AM - 9:25 AM**      **The Impact and Sources of Radio Frequency Interference on GNSS Signals**  
Endawoke Yizengaw, The Aerospace Corporation
- 9:25 AM - 9:45 AM**      **Panel & Audience Discussion**
- 9:45 AM - 10:45 AM**      **Break and Poster Session: Geospace/Magnetosphere Research and Applications and Space Weather Policy and General Space Weather Contributions**
- 10:45 AM - 11:00 AM**      **Special Presentation: Advancing Space Weather Socio-economic Impact Assessments**  
Edward Oughton, George Mason University
- 11:00 AM - 12:15 PM**      **Navigating the Storm: Effective Communication Strategies For Space Weather Events**  
Co-Chairs: Shawn Dahl, NOAA SWPC  
Simon Machin, UK Met Office
- 11:00 AM - 11:05 AM**      **Overview and Introductions**  
Shawn Dahl, NOAA SWPC
- 11:05 AM - 11:15 AM**      **Communicating Top Level Space and Space Weather News**  
Jeff Foust, SpaceNews
- 11:15 AM - 11:25 AM**      **Lessons Learned: Explaining Space Physics to Non-Scientists**  
Kasha Patel, The Washington Post
- 11:25 AM - 11:35 AM**      **Success Stories and the Changing Landscape of Space Weather Communication**  
Tamitha Skov, Millersville University
- 11:35 AM - 11:45 AM**      **Navigating Space Weather: The Role and Challenges of the Space Weather Journal in Event Communication**  
Steve Morley, Los Alamos National Laboratory
- 11:45 AM - 11:55 AM**      **Bridging Space Weather and Society: Lessons on Effective Space Weather Communication from Terrestrial Weather**  
Kim Klockow, NOAA National Centers for Environmental Prediction (NCEP)

- 11:55 AM - 12:15 PM Panel & Audience Discussion**
- 12:15 PM - 1:30 PM Lunch**
- 1:30 PM - 2:30 PM Emerging Workforce Development**  
Co-Chairs: Alessandra Pacini, NOAA NCEI  
Kelly Korreck, NASA HQ
- 1:30 PM - 1:35 PM Overview and Introductions**  
Alessandra Pacini, NOAA NCEI
- 1:35 PM - 1:43 PM Hackathons and Other Effective Training/Resources for the Space Weather Emerging Workforce in Big Data Analysis (AI/ML)**  
Enrico Camporeale , University of Colorado Space Weather Technology, Research, and Education Center (SWxTREC)
- 1:43 PM - 1:51 PM Space Weather and Science Education: Curriculum Development Needs and Challenges**  
Ramon Lopez, The University of Texas at Arlington
- 1:51 PM - 1:59 PM Beyond the Sphere: Maximizing NOAA’s Science on a Sphere (SOS) Tools for K-12 Space Weather Engagement**  
Hilary Peddicord, CU CIRES
- 1:59 PM - 2:07 PM Mentoring the Emerging Space Weather Workforce: Challenges and Tips for Senior Professionals**  
Mike Wiltberger, NCAR High Altitude Observatory (HAO)
- 2:07 PM - 2:30 PM Panel & Audience Discussion**
- 2:30 PM - 3:30 PM Break and Poster Session: Geospace/Magnetosphere Research and Applications and Space Weather Policy and General Space Weather Contributions**
- 3:30 PM - 4:40 PM Bridging the Gap: Overcoming Challenges in Ground-Based Observations for Space Weather Forecasting**  
Co-Chairs: Michael Hartinger, Space Science Institute  
Kathryn Wilbanks, University of Michigan
- 3:30 PM - 3:35 PM Overview and Introductions**  
Michael Hartinger, Space Science Institute
- 3:35 PM - 3:43 PM The University of Calgary Ground-Based Sensor Network for Space Science and Space Weather**  
Emma Spanswick, University of Calgary
- 3:43 PM - 3:51 PM NSO solar/ngGONG**  
Alexei Pevtsov, National Solar Observatory (NSO)
- 3:51 PM - 3:59 PM Neutron Monitors**  
Pierre Simon Mangeard, University of Delaware

- 3:59 PM - 4:07 PM**      **Riometers**  
David McCormack, Natural Resources Canada
- 4:07 PM - 4:15 PM**      **Ground-based radio measurements of the Arctic Ionosphere**  
P. T. Jayachandran, University of New Brunswick
- 4:15 PM - 4:23 PM**      **A Sustainable Business Model for Operational Data Streams from Remote Magnetometer Installations**  
Steven Berg, Computational Physics, Inc.
- 4:23 PM - 4:40 PM**      **Panel & Audience Discussion**
- 4:40 PM - 5:30 PM**      **Empowering Resilience to Space Weather through Enhanced Observations**  
Co-Chairs: Steven Hill, NOAA SWPC  
Bhagyashree Waghule, University of Colorado, Boulder
- 4:40 PM - 4:45 PM**      **Overview and Introductions**  
Steven Hill, NOAA SWPC
- 4:45 PM - 4:53 PM**      **Argos Unmanned Aerial Vehicle (UAV) Flight Testing**  
Justin Bailey, Space Environment Technologies
- 4:53 PM - 5:01 PM**      **Gannon Storm and Radiation Belt Effects**  
Richard Horne, British Antarctic Survey
- 5:01 PM - 5:09 PM**      **Advancing Magnetographs for Improved Space Weather Forecasts and Products**  
Neal Hurlburt, Lockheed Martin
- 5:09 PM - 5:17 PM**      **South American Solar and Space Weather Ground-based Networks**  
Jean-Pierre Raulin, Center for Radio Astronomy and Astrophysics, Mackenzie University
- 5:17 PM - 5:30 PM**      **Panel & Audience Discussion**

---

**Friday, March 21**      Location: Pearl St. Ballroom

---

- 8:30 AM - 9:40 AM**      **Advances in Space Weather Modeling**  
Co-Chairs: Dan Welling, University of Michigan  
Eric Adamson, NOAA SWPC
- 8:30 AM - 8:35 AM**      **Overview and Introductions**  
Dan Welling, University of Michigan
- 8:35 AM - 8:45 AM**      **Update on CCMC activities Aligned with Decadal Space Weather Recommendations and SWAG Report**  
Masha Kuznetsova, NASA Goddard Space Flight Center

- 8:45 AM - 8:55 AM**      **Modeling the Gannon Storm with Multiscale Atmosphere-Geospace Environment Model (MAGE)**  
Kevin Pham, NCAR HAO
- 8:55 AM - 9:05 AM**      **NASA Center of Excellence (CoE) All-Clear Solar Energetic Particle Forecasts (CLEAR) Solar Energetic Particles (SEPs)**  
Lulu Zhao, University of Michigan
- 9:05 AM - 9:15 AM**      **NASA's SWORD Space Weather Center of Excellence: Strategies to Improve Space Weather Forecasting in Geospace**  
Tom Berger, University of Colorado
- 9:15 AM - 9:25 AM**      **The Air Force Research Laboratory's Support of the DoD and National Space Weather Needs**  
Shawn Young, AFRL
- 9:25 AM - 9:40 AM**      **Panel & Audience Discussion**
- 9:40 AM - 10:00 AM**      **Break**
- 10:00 AM - 10:15 AM**      **Special Presentation: Opening New Horizons with the Korea-led L4 Mission: March 2025 Progress Report**  
Kyung-Suk Cho, Korea Astronomy and Space Science Institute (KASI)
- 10:15 AM - 11:05 AM**      **Developing Global Resilience to Space Weather Storms**  
Co-Chairs: Mark Gibbs, UK Met Office  
Juha-Pekka Luntama, European Space Agency (ESA)
- 10:15 AM - 10:20 AM**      **Overview and Introductions**  
Mark Gibbs, UK Met Office
- 10:20 AM - 10:28 AM**      **Korean Space Weather Program**  
Kichang Yoon, Korea AeroSpace Administration (KASA)
- 10:28 AM - 10:35 AM**      **Space Weather Research and Services at the German Aerospace Center (DLR)**  
Jens Berdermann, DLR
- 10:35 AM - 10:43 AM**      **Japanese Space Weather Programs**  
Mamoru Ishii, Radio Research Institute, National Institute of Information and Communications Technology and Institute for Space-Earth Environmental Research/Nagoya University
- 10:43 AM - 10:51 AM**      **Integration of Space Weather into WMO Activities**  
Jesse Andries, World Meteorological Organization (WMO)
- 10:51 AM - 11:05 AM**      **Panel and Audience Discussion**

- 11:05 AM - 12:05 PM**    **Innovation and Advancement of Space Weather Products and Services**  
 Co-Chairs: Rodney Viereck, CU CIRES  
 George Millward, CU CIRES
- 11:05 AM - 11:10 AM**    **Overview and Introductions**  
 Rodney Viereck, CU CIRES
- 11:10 AM - 11:18 AM**    **Compact Vector Helium Magnetometer (CVHM) for Space Weather Monitoring of the Interplanetary Magnetic Field**  
 Corey Cochrane, NASA Jet Propulsion Laboratory (JPL)
- 11:18 AM - 11:26 AM**    **NOAA/NCEI SWx Data Infrastructure**  
 Alessandra Pacini, NOAA NCEI
- 11:26 AM - 11:34 AM**    **2024 GIC Meeting Outcomes and User Needs**  
 Dan Welling, University of Michigan
- 11:34 AM - 11:42 AM**    **The May 2024 Solar and Geospace Superstorm Workshop: Outcomes and Guidance for Space Weather Providers and Users**  
 Michael Wiltberger, NCAR HAO
- 11:42 AM - 11:50 AM**    **Solar Sails**  
 Pat Mulligan, The MITRE Corporation
- 11:50 AM - 12:05 PM**    **Panel and Audience Discussion**
- 12:05 PM – 12:15 PM**    **The Geomagnetic Storm Forecast Funnel: From Solar Cycle Trends to Ground-Level Impacts**  
 Briana “Bri” Muhlestein, NOAA SWPC
- Meeting Conclusion**
- 12:15 PM - 12:25 PM**    **Closing Remarks**  
 Howard Singer, NOAA SWPC
- Post-Workshop Events**
- 1:00 PM - 3:00 PM**    **ISES Annual Meeting (by invitation only)**  
 Location: “Royal Arch” Meeting Room