MONDAY LOCATION: VARIES | **TUESDAY** LOCATION: PEARL ST. BALLROOM | **WEDNESDAY** LOCATION: PEARL ST. BALLROOM | **THURSDAY** LOCATION: PEARL ST. BALLROOM | **FRIDAY** LOCATION: PEARL ST. BALLROOM

SPACE WEATHER WORKSHOP STRUCTURE GUIDE

as of April 11; see Detailed Agenda for latest information

A Student View Prepared by Bhagyashree Waghule and Vincent Ledvina

Agencies, Centers, and Policy Related Talks/Discussions

M 8:00-10:00 Walnut and Mall	User Readiness for Space Weather Data from NOAA Program Of Record-2025 Missions	**W 8:30 - 10:05**	**The 2023 Space Weather Implementation Plan - Path to Execution**
M 10:00-12:00 Walnut and Mall	Coordination Group for Meteorological Satellites (CGMS) Data Access	W 8:35 - 8:45	Building a Space Weather Ready Nation (NOAA/NWS)
M 10:00-12:00 East-West	DOD Space Weather Enterprise (by invitation only)	W 8:45 - 8:55	Space Weather Observations in Support of an Operational Space Weather Capability
M 13:00-17:00 Pearl Street Ballroom	NOAA Space Weather Scales	W 8:55 - 9:05	NASA
T 8:40 - 9:00	Space Weather Events and Impacts - Year in Review	W 9:05 - 9:15	NSF Support for Space Weather Research, Observations, and Workforce Development
T 9:00 - 9:35	**National Policy Initiatives**	W 9:15 - 9:25	2023 Space Weather Implementation – USSF's Path to Execution
T 9:05 - 9:15	Perspective from House Science Committee	W 9:25 - 9:35	USGS
T 9:15 - 9:25	Perspective from OSTP	W 9:35 - 9:45	Implementation through the Commercial Marketplace
T 9:25 - 9:35	Discussion & Q&A	W 13:35 - 13:43	NOAA SWPC Preparations for Artemis
T 9:35 - 9:50	**Special Presentation: UK Science Policy**	**W 16:45 - 17:00**	**Special Presentation: Space Weather - Perspective of the Department of Homeland Security**
T 10:45 - 11:45	**PROSWIFT User Survey - Space Weather Advisory Group**	**Th 8:30 - 9:45**	**Centers Advancing Research to Operations**
T 10:45 - 10:55	Overview of PROSWIFT User-Survey Initiative	Th 8:35 - 8:45	CLEAR: Center for All-Clear SEP Forecast
T 10:55 - 11:00	Emergency Management	Th 8:45 - 8:55	Space Weather Research and Technology Applications (SPARTA) Center of Excellence
T 11:00 - 11:05	Space Traffic Management/Coordination	Th 8:55 - 9:05	Space Weather Operational Readiness Development (SWORD) Center
T 11:05 - 11:10	Electric Power	Th 9:05 - 9:15	Center of Excellence for Advanced Forecasting of Drag for Enhanced, Sustainable, and Conscientious Space Operations
T 11:10 - 11:20	Human Space Flight and Aviation	Th 9:15 - 9:25	Center for Geospace Storms
T 11:20 - 11:25	Research	**Th 10:45 - 11:00**	**Special Presentation: Upcoming Space Weather Tabletop Exercise at APL**
T 11:25 - 11:45	Discussion & Q&A	Th 15:59 - 16:07	Space Weather Advances within ESA's Space Safety Programme
T 13:30 - 14:30	**Building Resilience to Geomagnetic Storms in the U.S. and Canadian Power Grid**	Th 16:07 - 16:15	Korean Space Weather Center
T 13:35 - 13:43	Recent Developments at DOE to address GMD		
T 13:43 - 13:51	Completion of the MT Survey and its Contribution to Geoelectric Field		
T 13:59 - 14:07	UK Government & Industry Activities to Support Electricity Resilience		
T 14:30 - 14:45	**Special Presentation: Lessons from Department-Level Exercise at USDA**		

Engagement Activities

M 17:30 - 19:30 NCAR Mesa Lab	Networking Session for Registered Space Weather Workshop Participants
M 15:00 - 17:00 Royal Arch Meeting Room	Student Program - Citizen Science, AI/ML, and Diversity (students and invited guests)
T 12:30 - 14:15	SWPC Tour (for those pre-registered for the tour)
W 8:15 - 8:30	Today's Space Weather Forecast + Q&A
W 12:00 - 13:30 Royal Arch Meeting Room	Student Program - Speed Mentoring Session (students and invited guests)
W 12:00 - 13:30 Baseline Boardroom	ACSWA Lunch (invitation only)
W 19:00 - 21:00	Banquet Dinner and Talk
Th 12:30 - 14:15	SWPC Tour (for those pre-registered for the tour)
F 11:50 - 12:00	Closing Remarks

Poster Lightning Talks

Solar and Interplanetary Research and Applications and Aviation (T 11:45 - 12:15)
Far-Side Active Regions Based on Helioseismic and EUV Measurements:Toward a Global Index
Identifying solar flare precursors in a forest of EUV signatures
QuickPUNCH: Observations for Space Weather Operations and Research
Examining the Accuracy of The OMNI Data in Representing ICME Observations Near Earth and the Effect on Global Modeling
Towards Predictive Uncertainty Quantification in Space Weather Simulations Through Surrogate Models for Dynamical Systems
Deep Learning-Based Analysis of Near-Real-time single-viewpoint Coronagraph Images using Neural Networks.
Statistical Relationships Between Solar Wind Parameters: Implications for Space Weather Forecasts
Assessment of Vulnerability of U.S. National Airspace System to Space Weather

Poster Lightning Talks

Ionosphere and Thermosphere Research and Applications (T 17:00 - 17:30)
AI-Based Ionospheric Scintillation Impact Prediction
Deep Learning-Based Solar Irradiance Prediction Model using the FISM2 Dataset During the Solar Flare Events
Space Weather Ionospheric Network Canada
Geospace Dynamics Constellation: The Mission We Need for the New Era of Access to LEO
Leveraging Data Assimilative Models for Enhanced Satellite Drag Predictions
Assessing the Relationship Between the Quasi-biennial Oscillation and D-region Electron Density
Agile Collaboration: Citizen Science as a Transdisciplinary Approach to Heliophysics

Poster Lightning Talks

Geospace/Magnetosphere Research and Applications; Space Weather Policy and General Space Weather Contributions (W 17:00 - 17:30)
Estimating the Impact of the Magnetometer Network on the SWPC Geoelectric Field Model
Revamping Models of Energetic Electron Precipitation Based on Realistic NOAA/POES Response Functions
Global Geomagnetic Perturbation Forecasting with Quantified Uncertainty Using Deep Gaussian Process
Multi-model Ensemble Forecasts of Ground Magnetic Perturbations
I-ALiRT System for Forecasting Space Weather
Automatically Labelled EUV and X-Ray Incident Solarflare Catalog
Towards An Australian Centre of Excellence in Space Weather

Poster Sessions

T 9:50 - 10:45; 14:45 - 15:45	Solar and Interplanetary Research and Applications; and Aviation Radiation Research and Applications	W 10:05 - 10:55; 14:30 - 15:20	Ionosphere and Thermosphere Research and Applications	Th 9:45 - 10:45; 14:30 - 15:30	Geospace/Magnetosphere Research and Applications; Space Weather Policy and General Space Weather Contributions

Space Weather Impacts

GICs	
T 13:30 - 14:30	**Building Resilience to Geomagnetic Storms in the U.S. and Canadian Power Grid**
T 13:35 - 13:43	Recent Developments at DOE to address GMD
T 13:43 - 13:51	Completion of the MT Survey and its Contribution to Geoelectric Field
T 13:51 - 13:59	Understanding the Impact of Space Weather on the Power Grid with Geoelectric Field Modeling
T 13:59 - 14:07	UK Government & Industry Activities to Support Electricity Resilience
T 14:07 - 14:15	NERC Geomagnetically Induced Currents Database
T 14:15 - 14:30	Discussion & Q&A
W 9:25 - 9:35	The Role of the US Geological Survey in Space Weather Monitoring and Hazard Characterization
Th 16:35 - 16:45	Global high-resolution MHD simulations of interplanetary CMEs and their geoeffective properties
F 10:20 - 10:50	**Induced Current Susceptibility and Resilience**
F 10:23 - 10:31	Geomagnetic Induction in Submarine Cables
F 10:31 - 10:39	Space Weather Modeling for the Solar Tsunamis Project
F 10:39 - 10:47	Mapping Magnetic Superstorms
F 10:47 - 10:55	Discussion & Q&A

HF communication and Satellite Operations	
W 10:55 - 12:00	**Improving Space Weather Services for Satellite Operations**
W 10:58 - 11:06	Recap of the 2023 Satellite Environment Testbed Exercise
W 11:06 - 11:14	What is the Space Information Sharing and Analysis Center (Space ISAC)?
W 11:14 - 11:22	Amazon Project Kuiper
W 11:22 - 11:30	Maxar On-Orbit Operations and Future Needs
W 11:30 - 11:38	The Spacecraft Anomaly Resolution Knowledgebase (SPARK) and Machine Intelligence for Space Weather (MINTS)
W 11:38 - 11:46	Thermospheric Forecasting for LEO Satellites
W 11:46 - 12:00	Discussion & Q&A
W 15:20 - 16:05	**Observing and Modeling the Ionosphere: Supporting Communications and**
W 15:25 - 15:33	New GDGPS Products for High-Precision Real-Time GNSS Applications to Support Public and Scientific Users
W 15:33 - 15:41	Ionosphere TEC and Scintillation Observations Using Spaceborne GNSS Reflectometry
W 15:41 - 15:49	Using GNSS receivers on SmallSat Platforms for Ionospheric Specification
W 15:49 - 16:05	Discussion & Q&A
Th 13:51 - 13:59	Owens Valley Radio Observatory Long Wavelength Array (OVRO-LWA) and the 14 December Radio Event

Aviation	
T 15:45 - 17:00	**Space Weather Services in Support of Aviation Operations**
T 15:50 - 15:58	Nowcast of Aerospace Ionizing RAdiation System (NAIRAS) Model
T 15:58 - 16:06	Using REACH data in support of Aviation
T 16:06 - 16:14	Aeronautical Regional Geospatial Observer System (ARGOS) Stratospheric Drone Flight Test for Use in Aviation Radiation Measurements
T 16:14 - 16:22	Space Weather - Delta Airlines Perspective
T 16:22 - 16:30	Space Weather: Meeting the Needs for Global Aviation Services
T 16:30 - 17:00	Discussion & Q&A

Radiation Effects	
W 13:30 - 14:30	**Space Weather Support for Human Habitation on the Moon and Beyond**
W 13:35 - 13:43	NOAA Space Weather Prediction Center (SWPC)
W 13:43 - 13:51	Space Radiation Analysis Group - Flight Rules for Operations
W 13:51 - 13:59	Space Weather Support for Human Exploration: NASA Moon-to-Mars (M2M)
W 13:59 - 14:07	Analyzing Space Weather at Mars with MAVEN
W 14:07 - 14:15	Space Weather Opportunities and Needs in NASA's Moon to Mars Exploration Architecture
W 14:15 - 14:30	Discussion & Q&A
Th 16:45 - 16:55	Creating an SEP Forecast for Cislunar Space
Th 16:55 - 17:05	Space Charging Environment in Cislunar Space and Impacts to Gateway
Th 17:05 - 17:15	Solar Cycle of Radiation Measurements on the Surface of Mars

Space Weather Research/Modeling and R2O2R

Space Weather Operations and Future Missions			
W 15:33 - 15:41	Ionosphere TEC and Scintillation Observations Using Spaceborne GNSS Reflectometry	**F 8:30 - 10:00**	**Space Weather Innovation Projects**
Th 13:30 - 14:30	**Space Weather: New and Future Observations and Data Access to Advance Understanding and Forecasting**	F 8:35 - 8:45	TRITON: Tiny Remote-sensing Instrument for the Thermospheric Oxygen and Nitrogen
Th 13:35 - 13:43	GONG and ngGONG	F 8:45 - 8:55	Using Commercial Satellite Constellation Data to Drive Thermospheric Density Forecast Capabilities
Th 13:43 - 13:51	I-ALiRT (IMAP Active Link for Real-Time)	F 8:55 - 9:05	Solar Sail Fabrication for Solar Cruiser Project
Th 13:51 - 13:59	Owens Valley Radio Observatory Long Wavelength Array (OVRO-LWA) and the 14 December Radio Event	F 9:05 - 9:15	Compact vector Helium magnetometer (CVHM) Development
Th 13:59 - 14:08	Overview of NOAA Space Weather Products at the NCEI	F 9:15 - 9:25	AI, Data and Their Application to SW Forecasting
Th 14:08 - 14:16	Future Solar Magnetograph Observations from Space	F 9:25 - 9:35	Space Weather Array Prompt Experiment (SWAP-E) Cubesat constellation
Th 14:16 - 14:30	Discussion & Q&A	F 9:35 - 10:00	Discussion & Q&A
Th 15:30 - 16:30	**Advances in Space Weather Modeling, Observations, and Services - I**		
Th 15:35 - 15:43	The Community Coordinated Modeling Center Role in Advancing the R2O Pipeline		
Th 15:43 - 15:51	Space Weather Support for the James Webb Space Telescope Launch		
Th 15:51 - 15:59	SWIMMR Results		
Th 15:59 - 16:07	Space Weather Advances within ESA's Space Safety Programme		
Th 16:07 - 16:15	Korean Space Weather Center (KSWC)		
Th 16:15 - 16:30	Discussion & Q&A		

Modeling Efforts	
Th 11:00 - 12:10	**Space Weather Research to Operations: NSF-NASA Space Weather with Quantified Uncertainities**
Th 11:05 - 11:15	Improving Space Weather Predictions with Data-Driven Models of the Solar Atmosphere and Inner Heliosphere
Th 11:15 - 11:25	NextGen Space Weather Modeling Framework Using Data, Physics and Uncertainty Quantification
Th 11:25 - 11:35	A Flexible Community-based Upper Atmosphere Ensemble Prediction System
Th 11:35 - 11:45	Forecasting Small-Scale Plasma Structures in the Earth's Ionosphere-Thermosphere System
Th 11:45 - 11:55	Ensemble Learning for Accurate and Reliable Uncertainty Quantification
Th 11:55 - 12:10	Discussion & Q&A
Th 16:30 - 17:30	**Advances in Space Weather Modeling, Observations and Services - II**
Th 16:35 - 16:45	Global high-resolution MHD simulations of interplanetary CMEs and their geoeffective properties
Th 16:45 - 16:55	Creating an SEP Forecast for Cislunar Space
Th 16:55 - 17:05	Space Charging Environment in Cislunar Space and Impacts to Gateway
Th 17:05 - 17:15	Solar Cycle of Radiation Measurements on the Surface of Mars
Th 17:15 - 17:30	Discussion & Q&A

Other Space Weather Activities

W 16:05 - 16:45	**Space Weather Workforce Development**
W 16:10 - 16:18	GlobalMindED - Creating a Capable, Diverse Talent Pipeline
W 16:18 - 16:26	Space Weather for a Sustainable Future - thoughts of a UNOOSA Space4Women mentor
W 16:26 - 16:34	Toward Space Weather Curriculum for High School Physics: Building a Three-Dimensional Unit Storyline aligned with Next-Generation Science Standards
W 16:34 - 16:45	Discussion & Q&A
F 10:55 - 11:50	**Citizens & Scientists: Tackling Space Weather Together**
F 10:58 - 11:08	Aurora Apps: The Good, The Bad, and The Ugly
F 11:08 - 11:18	Communicating Space Weather to the Non-Expert and the Public
F 11:18 - 11:28	Innovative solutions to meet the space weather challenge: EZIE, EZIE-Mag, SuperMAG
F 11:28 - 11:38	**Special Presentation - Solar Cycle Prediction**
F 11:38 - 11:50	Discussion & Q&A