

2017 Space Weather Enterprise Forum

*Implementing a National Space
Weather Partnership*



Sponsored by

United States Air Force

and

Secure World Foundation

and

National Space Weather Partnership

Your Host

Mr. Ralph O. Stoffler
Director of Weather, Deputy
Chief of Staff for
Operations, Headquarters,
U.S. Air Force, Washington,
D.C.



Space Weather Enterprise Partnership

National Space Weather Partnership

- Government: Commerce (NOAA), Defense (Air Force, Navy), Energy, Homeland Security, Interior, State, Transportation, NASA, NSF, and the White House Executive Office of the President (OSTP and OMB)
- Commercial: ACSWA, UCAR, COMPTia Space Enterprise Council, Satellite Industry Assoc., Satellite Industry Assoc.
- Academic Institutions: National Academies of Science, Johns Hopkins APL,
- Non-Profit Organizations: Secure World Foundation (Thank you for your Support)

The NSWP achieves synergistic results allowing each partner organization to enhance national capabilities.

US Government Collaboration



Other Partners



SWEF Objectives

- **Share information across the enterprise and raise awareness for new users, decision makers, and policymakers**
- **Identify effective approaches to build resilience across society, particularly in critical infrastructure protection and support.**
- **Identify effective approaches to raise awareness in the broader society.**
- **Improve communications within and external to the enterprise.**
- **Collect information to support the development of new National Space Weather Plans.**



Agenda

- **Session 1:** Opening
- **Session 2:** Space Weather Impacts, Preparation, and Mitigation
- **Session 3:** Space Weather Services, Science and Supporting Infrastructure.

Lunch Break / Poster Session

- **Session 4:** National Space Weather Strategy and Action Plan Update
- **Session 5:** The National Space Weather Partnership
- **Session 6:** Closing



2017 Space Weather Enterprise Forum

National Security Perspective

Major General Scott A. Vander Hamm

Assistant Deputy Chief of Staff,
Operations, Headquarters U.S. Air
Force, the Pentagon, Washington,
D.C.



2017 Space Weather Enterprise Forum



Keynote Speaker

Dr. Stephen Volz

Assistant Administrator for Satellite
and Information Services

National Oceanic and Atmospheric
Administration (NOAA) Administrator



Session 2: Space Weather Impacts and Mitigation

Moderator: Mr. Jacob Anderson,
Office of Infrastructure Protection
Department of Homeland Security
(DHS)

- **Ms. Kenyetta Blunt**, Chief, Recovery Planning Branch, Federal Emergency Management Agency
- **Mr. Ralph Stoffler**, U.S. Air Force Director of Weather,
- **Dr. Ken Friedman**, Senior Policy Advisor, Office of Electricity Delivery and Energy Reliability, Dept. of Energy
- **Mr. Mark MacAlester**, Telecommunications Specialist and National Response Coordinator, FEMA Disaster Emergency Communications Division



Session 3: Space Weather Services, Science and Supporting Infrastructure

Moderator: **Mr. Mathew Jones,**

Director of C4ISR and Advanced Technology and Government Operations at Boeing, and Chair of the Technology Industry Association's Space Enterprise Council.



- **Dr. Thomas Zurbuchen**, Assoc. Administrator, NASA Science Mission Directorate
- **Dr. Bill Easterling**, Assistant Director for Geosciences, National Science Foundation
- **Dr. Louis Uccellini**, NOAA Assistant Administrator for Weather Services and Director, National Weather Service
- **Dr. Conrad Lautenbacher**, Chief Executive Officer, GeoOptics Incorporated and American Commercial Space Weather Association (ACSWA).



Poster Session:

Lunch and poster viewing until 2:00 PM

#	Short Title	Lead Author
P-01	NSWP History	Michael Bonadonna
P-02	RISK and resilience in the context of space weather	Christy M. Foran
P-03	Observing the Solar Wind	Joe Davila
P-04	EarthScope Magnetotelluric Surveys (w/ video)	Adam Schultz
P-05	SWx Societal Cost Impacts Analysis	Stacey Worman
P-06	EUV Photon Sieve telescopes	Emily Mason
P-07	Geoelectric Field Maps	Anna Kelbert
P-08	Challenge for Next Generation Space Weather Measurements.	George Ho
P-09	The American Commercial Space Weather Assoc. (ACSWA)	Bob Robinson
P-10	SPORT Cubesat mission	Jim Spann
P-11	Coronal And Magnetic Imagers	Neal Hurlburt
P-12	Ongoing and Future Space Weather Outreach Service: Five Years of Data and Analysis, and a Roadmap Looking Forward	Ben Davidson
P-13	SWING -- The Space Weather Integrated Network Group	Frank Hill
P-14	Update to NOAA's Space Weather Requirements and Mission Services represented in the NOAA Observing System Architecture (NOSA)	David Helms
P-15	The International Space Weather Initiative (ISWI): A Global Partnership in Creating a Space-Weather Awareness	Nat Gopalswamy
P-16	Space Weather Data Products and Modeling Capabilities at Los Alamos National Laboratory	Michael Henderson
P-17		
P-18		
P-19		
P-20		



Session 4: National Space Weather Strategy and Action Plan Update

Moderator: Mr. William Murtagh,
Program Coordinator, Space Weather Operations Research and Mitigation (SWORM) Subcommittee and NOAA Space Weather Prediction Center



- **Dr. Steven Clarke,** Director, Heliophysics Division, Headquarters, National Aeronautics and Space Administration
- **Dr. Jeffrey Love,** Research Geophysicist, Advisor for Geomagnetic Research, US Geological Survey
- **Mr. Kenneth Hodgkins,** Director, Office of Space and Advanced Technology, US Department of State
- **Dr. Seth Jonas,** Science and Technology Policy Institute



Session 5: The National Space Weather Partnership

Moderator: Ms. Victoria Samson,
Washington Office Director
Secure World Foundation



- **Dr. Sarah Gibson**, Chair, Committee for Solar and Space Physics, National Academies of Science, and University for Atmospheric Research (UCAR), Boulder, CO
- **Mr. Alec Engell**, NextGen Federal Systems and American Commercial Space Weather Association (ACSWA)
- **Mr. Charles Chafer**, Space Services Incorporated and American Commercial Space Weather Association (ACSWA)
- **Dr. Daniel Baker**, Laboratory for Atmospheric and Space Physics (LASP), University of Colorado, Boulder, CO



Session 6: Summary

Dr. William Schulz,
Federal Coordinator, Office of the
Federal Coordinator for
Meteorology

- What we heard yesterday and today
- Key points and take aways
- Questions to be answered
- What next?



SWEF Objectives

- Share information across the enterprise and raise awareness for new users, decision makers, and policymakers
- Identify effective approaches to build resilience across society, particularly in critical infrastructure protection and support.
- Identify effective approaches to raise awareness in the broader society.
- Improve communications within and external to the enterprise.
- Collect information to support the development of new National Space Weather Plans.



Next Steps

- **Analyze results to apply to the National Space Weather Partnership**
- **Provide results to support the National Space Weather Strategy and Action Plan**
- **Begin planning for the next SWEF for the Summer 2018**



Post-Forum Information

- **Forum materials will be available online**
 - **Program book (updated)**
 - **Final agenda**
 - **Summary report**
 - **Presentations**
 - **Audio recording**
 - **Written Transcript**

<http://www.ofcm.gov/>

<https://swfound.org/>



Final Comments

- **Thank you!**
 - **Speakers, moderators, and panelists**
 - **Session coordinators & rapporteurs**
 - **OFCM Staff and the SWEF Organizing Committee**
 - **National Space Weather Partnership Members**
 - **Attendees!**

