

2017 Space Weather Workshop Agenda (with Presentations)

Omni Interlocken Hotel

Updated: 6/9/17

Monday, May 1

- 2:00 - 4:30** Electron Sensor Intercalibration (Alder Boardroom)
1:30 - 4:30 R2O2R (Research to Operations - Operations to Research) Workshop (Fir Boardroom)
3:00 - 4:30 Student Workshop - by invitation (Private Dining Room)
- 5:00 - 7:00** Welcome Networking Session – Sponsored by Laboratory for Atmospheric and Space Physics (LASP) (Lobby Court)

Tuesday, May 2

- 8:30** **Conference Welcome**
Rodney Viereck, NOAA/SWPC
- 8:40 - 10:00** **Space Weather Workshop 2017 Kickoff**
Chair: Rodney Viereck, NOAA/SWPC
- 8:40** **Current Gaps in Understanding and Predicting Space Weather: An Operations Perspective**
Bill Murtagh, NOAA/SWPC
- 9:00** **Overview of Recent U.S. Government Space Weather Policies**
Seth Jonas, Science and Technology Policy Institute (STPI)
- 9:20** **Political Perspectives**
Annie Larson, Regional Director- Denver Office of Senator Cory Gardner
- 9:40** **ESA SSA Space Weather System**
Juha-Pekka Luntama, European Space Agency (ESA)
- 10:00 - 11:00** **Poster Session & Break (Solar and Interplanetary Research and Applications)**
- 11:00 - 12:30** **Economic Impacts**
Chair: Mark Gibbs, UK Met Office
- 11:00** **Disaster Impact Assessment Methods for Space Weather Critical Infrastructure Failure: Input-Output Approaches and Beyond**
Edward Oughton, Cambridge University
- 11:15** **The Social and Economic Impacts of Space Weather (U.S. Study)**
Stacey Worman, Abt Associates
- 11:30** **Report on the ESA Space Weather Socio-Economic Study**
Juha-Pekka Luntama, European Space Agency (ESA)
- 11:45** **Quantifying the Daily Economic Impact of Extreme Space Weather Due to Failure in Electricity Transmission Infrastructure**
Edward Oughton, Cambridge University
- 12:00 - 12:30** **Panel Discussion**

- 12:30 - 2:00** **Lunch SWPC Tour** (*Please Note: Tour participants will miss afternoon session talks*)
Tour bus departs the Omni Interlocken Lobby at 12:45 PM and returns at 3 PM
- 2:00 - 3:40** **Executive and Congressional Space Weather Activities**
Chair: Bill Murtagh, NOAA/SWPC
- 2:00** **United States Air Force Space Weather**
Ralph Stoffler, AFW
- 2:15** **The National Weather Service: Agency Update**
Bill Lapenta, NOAA/NWS
- 2:30** **NASA Perspective on R2O: Update**
Steven Clarke, NASA/Heliophysics (Presented by Elsayed Talaat)
- 2:45** **The Office of Infrastructure Protection**
Jack Anderson, DHS
- 3:00** **NSF Perspective on Space Weather R2O**
Paul Shepson, NSF
- 3:15 - 3:40** **Panel Discussion**
- 3:40 - 4:30** **Poster Session & Break (Solar and Interplanetary Research and Applications)**
- 4:30 - 5:30** **Broader Space Weather Community Perspectives**
Chair: Geoff Crowley, ASTRA
- 4:30** **Architecting the Future to Meet the Nation's Space Weather Needs**
Dan Baker, LASP
- 4:50** **The Space Weather Development Center: A Proposed Space Weather Community Model Solution**
Dan Welling, University of Michigan
- 5:10** **R2O: A Commercial Perspective**
Conrad Lautenbacher, ACSWA
- 5:30** **End of Session**
- 5:45 - 8:00** **11th Annual NOAA/ SWPC - Commercial Space Weather Interest Group (CSWIG)/American Commercial Space Weather Association (ACSWA) Summit Meeting – by invitation**

Wednesday, May 3

- 8:30 - 8:40** [Space Weather Morning Forecast](#)
Shawn Dahl, NOAA/SWPC Space Weather Forecasting Office
- 8:40 - 9:55** [R2O Challenges and Successes](#)
Chair: Elsayed Talaat, NASA/Heliophysics
- 8:40** [NASA LWS and Research to Operations](#)
Elsayed Talaat, NASA/Heliophysics
- 8:55** [The Air Force Research Laboratory and Space Weather R2O](#)
Michael Starks, AFRL
- 9:10** [U.S. Commercial Sector is the R2O2R Testbed](#)
W. Kent Tobiska, ACSWA
- 9:25** [NOAA Space Weather Prediction Center Research to Operations Activities](#)
Howard Singer, NOAA/SWPC
- 9:40** [A Hub for Advancing Science, Collaborative Development & R2O Transition](#)
Masha Kuznetsova, NASA/CCMC
- 9:55 - 11:00** **Poster Session & Break (Ionosphere Research and Applications / General Space Weather Services and Education)**
- 11:00 - 12:20** [R2O - The End User \(O\) Perspective](#)
Chair: Rodney Viereck, NOAA/SWPC
- 11:00** **Space Weather Research to Ops Transition: An Industry Perspective**
Jim Jones, Northrup Grumman
- 11:20** [Power Grid Impacts](#)
Robert Arritt, EPRI
- 11:40** [Space Weather – An Airline Perspective](#)
Tom Fahey, Delta Airlines
Gary Edwards, Flight Control Special Assignment Supervisor
- 12:00** [Rail Resilience to Space Weather](#)
Leslie McCormack, ATKINS
- 12:20 - 1:30** **Lunch**
- 1:30 - 2:50** [Extreme Events](#)
Chair: Howard Singer, NOAA/SWPC
- 1:30** [Extreme Space Weather Events: What Can Solar Magnetic Fields Tell Us?](#)
Jon Linker, Predictive Science, Inc. (PSI)
- 1:50** [Modeling and Understanding Extreme Space Weather](#)
Chigomezyo Ngwira, NASA/CCMC

- 2:10** [How Might the Thermosphere and Ionosphere React to an Extreme Space Weather Event?](#)
Tim Fuller Rowell, CIRES
- 2:30** [Space Weather Action Plan Goal 1: Benchmarks for Extreme Space Weather Events](#)
Rodney Viereck, NOAA/SWPC
- 2:50 - 3:50** **Poster Session & Break (Ionosphere Research and Applications / General Space Weather Services and Education)**
- 3:50 - 5:10** **GNSS Radio Occultation and COSMIC II**
Chair: Terry Onsager, NOAA/SPWC
- 3:50** [FORMOSAT-7/COSMIC-2 Status Update](#)
Wei Serafino, NOAA/NESDIS
- 4:10** [CICERO – Community Initiative for Continuing Earth Radio Occultation](#)
Conrad Lautenbacher, GeoOptics
- 4:30** [Ionosphere Collection Capability from a 3U CubeSat GNSS-RO Constellation](#)
Timothy Duly, Spire
- 4:50** **Space Weather Data from Commercial GNSS RO**
Robert Kursinski, PlanetIQ
- 5:10** **End of Session**
- 6:00 - 9:00** **Banquet Dinner at Omni Interlocken Ballroom**

Special Guest Speaker:

**Dr. Alan Stern, Associate Vice President and
Special Assistant to the President, Southwest Research Institute**

“The Exploration of Pluto by New Horizons”

Thursday, May 4

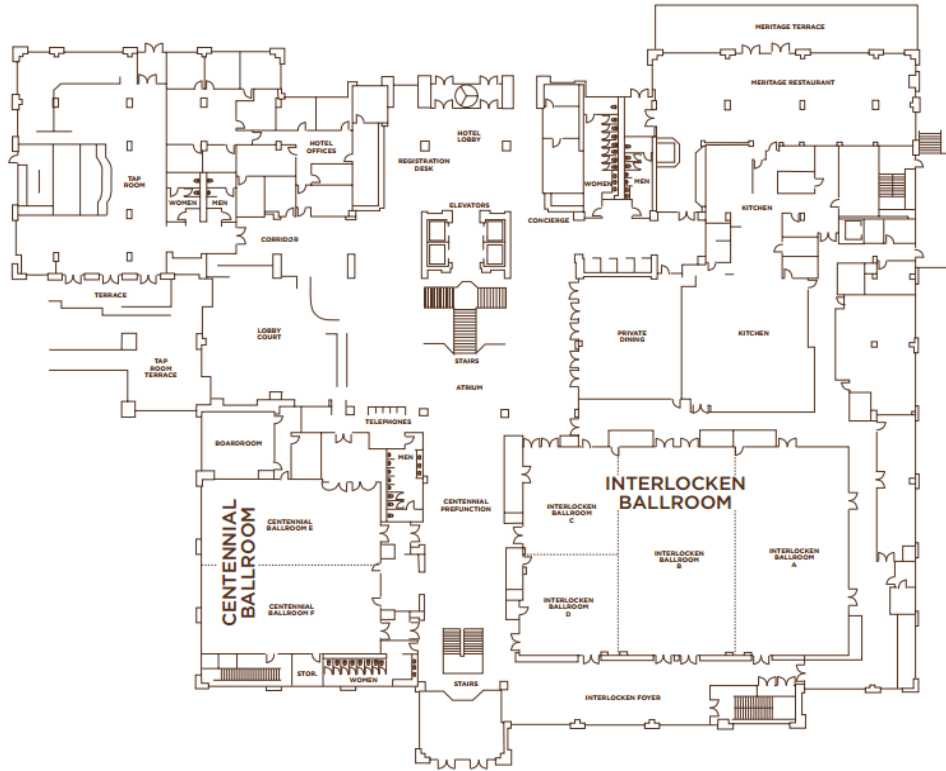
- 8:40 - 9:00** **Keynote: The Great Space Weather Storm of May 1967: It's role in Space Weather as We Know It**
Delores Knipp, University of Colorado
- 9:00 - 10:00** **GPS/GNSS and Space Weather I**
Chair: Mihail Codrescu, NOAA/SWPC
- 9:00** **Space Weather Impacts on GPS/GNSS**
Keith Groves, Boston College
- 9:20** **WAAS Ionospheric Algorithms and Threats**
Eric Altschuler, Sequoia Research Center (Presented by Keith Groves)
- 9:40** **GPS/GNSS and Space Weather - Commercial Perspective**
Geoff Crowley, ASTRA
- 10:00 - 11:00** **Poster Session & Break (Magnetosphere Research and Applications)**
- 11:00 - 12:00** **GPS/GNSS and Space Weather II**
Chair: Keith Groves, Boston College
- 11:00** **Equatorial Scintillation Impact on GNSS Precise Positioning Services**
Yahya Memarzedeh, Fugro
- 11:20** **The Positioning Services of the Norwegian Mapping Authority**
Knut Jacobsen, NMA
- 11:40** **Ionospheric services for GNSS applications and related research at DLR**
Jens Berdermann, DLR (German Aerospace Center)
- 12:00 - 2:00** **Lunch SWPC Tour (*Please Note: Tour participants will miss afternoon session talks*)**
****Tour bus departs the Omni Interlocken Lobby at 12:20 PM and returns at 2:30 PM****
- 2:00 - 3:40** **Space Weather Impacts on Satellites**
Chair: Rob Redmon, NOAA/NCEI
- 2:00** **Impact of Space Weather on the Satellite Industry**
Janet Green, Space Hazards Applications, LLC
- 2:20** **The AE9/AP9 Radiation and Plasma Environment Models**
Bob Johnston, AFRL
- 2:40** **SKYNET - SpaceWx in Operational Practice**
Ewan Haggarty, Airbus
- 3:00** **2d Weather Squadron Space Weather Anomaly Assessment Support**
Capt Maclane Townsend, DOD
- 3:20** **Space Weather and Launch Vehicles**
Ben Griffiths, Ball Aerospace
- 3:40 - 4:40** **Poster Session & Break (Magnetosphere Research and Applications)**

- 4:40 - 5:40** **Satellite Drag**
Chair: W. Kent Tobiska, Space Environment Technologies (SET)
- 4:40** **Satellite Tracking and Collision Avoidance (DOD)**
Capt Fred Schmidt, DOD
- 5:00** **Reducing Conjunction Analysis Errors with an Assimilative Tool for Satellite Drag Specification**
Geoff Crowley, ASTRA
- 5:20** **Neutral Atmospheric Density Modeling and the Conjunction Assessment Problem**
Matthew Hejduk, Astorum Consulting, LLC
- 5:40** **End of Session**

Friday, May 5

- 8:30 - 9:50** **New Data and Missions I**
Chair: Howard Singer, NOAA/SWPC
- 8:30** **SafeSky: Developing an Enterprise Strategy for Aviation Radiation Risk Management**
W. Kent Tobiska, Space Environment Technologies (SET)
- 8:50** **Space Weather Platforms and Future Capabilities**
Larry Zanetti, NOAA/NESDIS
- 9:10** **Report on the “L5 in Tandem with L1: Future Space-Weather Missions Workshop” – Steps Toward a L5 Operational SWx Mission**
Mario Bisi, Science & Technology Facilities Council / RAL Space
- 9:30** **Space Radiation Crew Protection and Operations for Exploration Missions**
Ramona Gaza, NASA/SRAG
- 9:50 - 10:20** **Break**
- 10:20 - 11:40** **New Data and Missions II**
Chair: Rodney Viereck, NOAA/SWPC
- 10:20** **Finally! GOES-16**
Bill Denig, NOAA/NCEI
- 10:40** **Advanced Technology in Small Packages Enables Space Weather Nanosatellites**
Tom Woods, LASP
- 11:00** **International Space Environment Service – the Global Space Weather Service Network**
Terry Onsager, NOAA/SWPC
- 11:20** **Solar Cycle Update**
Doug Biesecker, NOAA/SWPC
- 11:40** **Closing Remarks**
Bill Murtagh, NOAA/SWPC
- 11:50** **End of Conference**

Interlocken First Floor



Interlocken Garden Level

