

2017 Space Weather Workshop Agenda

Omni Interlocken Hotel

Updated 4/25/17

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** **Challenges of Forecasting Space Weather Storms**
Bill Murtagh, NOAA/SWPC
- 9:00** **Review of 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** **ESA**
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** **DOD R2O Perspectives**
Ralph Stoffler, AFW
- 2:15** **Update on SWORM/SWAP and R2O**
Bill Lapenta, NOAA/NWS
- 2:30** **NASA Perspective on R2O**
Steven Clarke, NASA/Heliophysics
- 2:45** **DHS and Space Weather**
Jack Anderson, DHS
- 3:00** **NSF Perspective on 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** **New Space Weather Initiative**
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 R2O**
Elsayed Talaat, NASA/Heliophysics
- 8:55** **The Air Force Research Laboratory and Space Weather R2O**
Michael Starks, AFRL
- 9:10** **Commercial R2O2R Activities**
W. Kent Tobiska, ACSWA
- 9:25** **NOAA/SWPC R2O Activities**
George Millward, Colorado University
- 9:40** **CCMC LWS R2O**
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: Industry Perspective**
Jim Jones, Northrup Grumman
- 11:20** **Power Grid Impacts**
Robert Arritt, EPRI
- 11:40** **Aviation Impacts**
Tom Fahey, Delta Airlines
Gary Edwards, Flight Control Special Assignment Supervisor
- 12:00** **Railroad Impacts**
Leslie McCormack, ATKINS
- 12:20 - 1:30** **Lunch (No Tour)**
- 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** **SWAP Benchmarks on Extreme 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** **COSMIC-2/FORMOSAT Program Status**
Wei Serafino, NOAA/NESDIS
- 4:10** **GeoOptics**
Conrad Lautenbacher, GeoOptics
- 4:30** **Ionosphere collection capability from a 3U CubeSat GNSS-RO constellation**
Timothy Duly, Spire
- 4:50** **PlanetIQ**
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

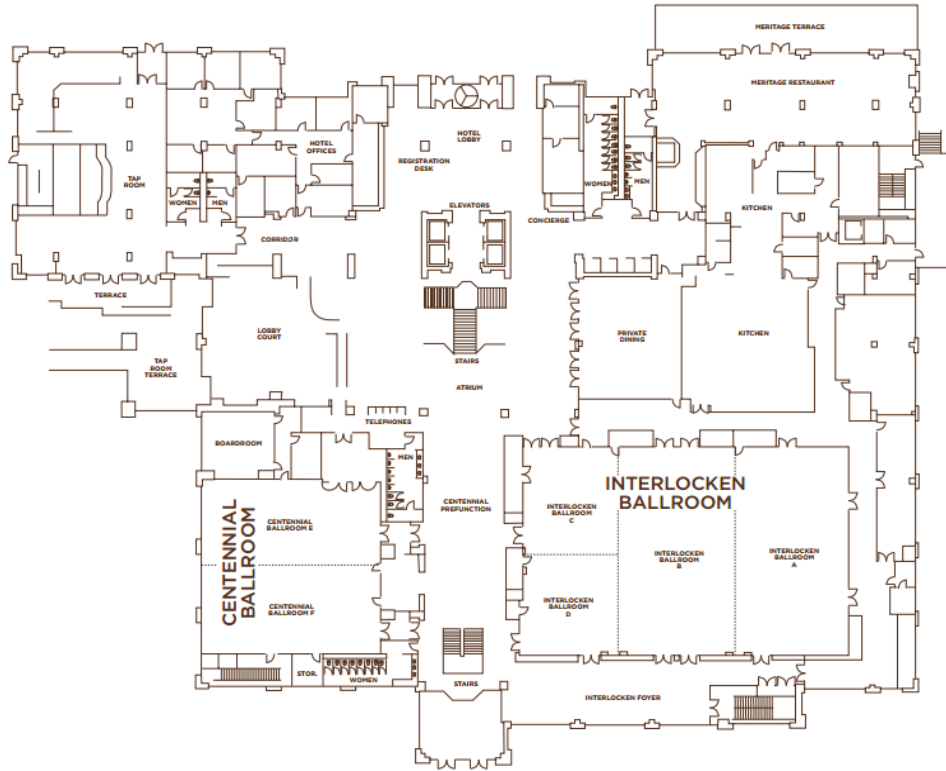
- 8:40 - 9:00** **Keynote: The Great Space Weather Storm of May 1967: It's role in Space Weather as We Know It**
Delores Knipp, University of Colorado
- 9:00 - 10:00** **GPS/GNSS and Space Weather I**
Chair: Mihail Codrescu, NOAA/SWPC
- 9:00** **GPS/GNSS Systems and Space Weather Impacts**
Keith Groves, Boston College
- 9:20** **WAAS Interference**
Keith Groves, Boston College (for Eric Altschuler, Sequoia Research Center)
- 9:40** **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**
Maclane Townsend, DOD
- 3:20** **Launch Vehicles and Space Weather**
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)**
Fred Schmidt, DOD
- 5:00** **Dragster: Satellite Drag Ensemble Assimilation Model**
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 Report: LWS Aviation Radiation Institute**
W. Kent Tobiska, Space Environment Technologies (SET)
- 8:50** **L1/L5 Satellites and Coronagraph Update**
Margaret Caulfield, 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**
Kerry Lee, 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

