


Fourth Symposium on Space Weather (Expanded View)

*  - Indicates paper has been withdrawn from meeting

[Compact View of Conference](#)

Sunday, 14 January 2007

7:30 AM-9:00 AM, Sunday, East Registration
Short Course Registration

9:00 AM-6:00 PM, Sunday, East Registration
Conference Registration

Monday, 15 January 2007

7:30 AM-6:00 PM, Monday, East Registration
Registration continues through Thursday, 18 January

9:00 AM-10:15 AM, Monday
Plenary Session for the Presidential Forum (Presidential Forum will then run parallel to other sessions throughout the day)

10:00 AM-10:45 AM, Monday, 210A
Coffee Break Reception - Sponsored by Ball Aerospace

10:45 AM-12:00 PM, Monday, 210A
[Session 1 Agency Updates on Space Weather Activities](#)

Chairs: Robert McCoy, Office of Naval Research, Arlington, VA; Gene Fisher, AMS Policy Program, Washington, DC

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|----------|-----|--|
| 10:45 AM | 1.1 | The NSF and Emerging Opportunities in Space Weather
Richard Behnke , NSF, Arlington, VA |
| 11:00 AM | 1.2 | Space Weather for the DoD Warfighter: An Agency Level Update
Mark Zettlemoyer , U.S. Air Force, Arlington, VA |
| 11:15 AM | 1.3 | Recent Activities at the NOAA Space Environment Center
Thomas J. Bogdan , Space Environment Center, National Centers for Environmental Prediction, Boulder, CO |
| 11:30 AM | 1.4 | NASA's contribution to Space Weather
Richard R. Fisher , NASA/Sun-Earth Connection Division, Washington, DC |
| 11:45 AM | 1.5 | The global community of magnetic observatories
Jeffrey Love , USGS, Denver, CO |

12:15 PM-1:30 PM, Monday
Lunch Break

1:30 PM-2:30 PM, Monday, 210A


[Session 2 space weather effects on aviation and impacts for the next generation air transportation system](#)

Chairs: Joseph Kunches, NOAA/Space Environment Center, Boulder, CO; Marsha Korose, NorthropGrumman IT/TASC, Arlington, VA

- 1:30 PM 2.1 [Policy Issues in Integrating Space Weather Information into Aviation Operations](#)
Genee Fisher, AMS Policy Program, Washington, DC; and B. Jones
- 1:45 PM 2.2 [The FAA's Office of Commercial Space Transportation: recent activities, regulations, and current events in the commercial space sector](#)
Karen Shelton-Mur, FAA Commercial Space Transportation, Washington, DC
- 2:00 PM 2.3 [Pilot perspective on space weather affects on the future of commercial aviation](#)
Michael D. Holland, American Airlines, Double Oak, TX
- 2:15 PM 2.4 [Effectively Managing American Airline's High-Latitude, Long-Range Operations](#)
Ray Howland, American Airlines, Fort Worth, TX

2:30 PM-4:00 PM, Monday, Exhibit Hall C
 Formal Poster Viewing with Coffee Break





2:30 PM-4:00 PM, Monday, Exhibit Hall C
[Poster Session 1 Space weather posters](#)

- P1.1 [Validation of the Community Radiative Transfer Model for Upper Air Sounding channels of the Special Sensor Microwave Imager \(SSMIS\)](#)
Clay B. Blankenship, NRL, Monterey, CA; and S. D. Swadley and N. Baker
- P1.2 [Environmental Space Situational Awareness and Joint Space Effects](#) 
Kelly J. Hand, Headquarters Air Force Space Command, Peterson AFB, CO; and M. France, R. Benz, T. Holts, T. Longmire, and B. T. Hendrickson
- P1.3 [Estimation of solar wind pressure and its impact on geomagnetic field during energetic solar events](#)
Hari Om Vats, Physical Research Laboratory, Ahmedabad, Gujarat, India

4:00 PM-5:45 PM, Monday, 210A
[Session 3 developments in data assimilation](#)

Chairs: Dean Pesnell, NASA, Greenbelt, Maryland; Marsha Korose, NorthropGrumman IT/TASC, Arlington, VA

- 4:00 PM 3.1 [Aspects of data assimilation peculiar to space weather forecasting](#)
George Siscoe, Boston University, Boston, MA
- 4:15 PM 3.2 [A Thermosphere-Ionosphere Data Assimilation Model Component for a Seamless Ocean-Atmosphere Model](#)
Robert W. Schunk, Utah State University, Logan, UT; and L. Scherliess, D. C. Thompson, J. J. Sojka, and L. Zhu
- 4:30 PM 3.3 [USU GAIM: An operational data assimilation model of the ionosphere](#)
Ludger Scherliess, Utah State University, Logan, UT; and R. W. Schunk, J. J. Sojka, and D. C. Thompson
- 4:45 PM 3.4 [Four dimensional imaging of Space Weather events using IDA3D](#)
Gary S. Bust, Atmospheric & Space Technology Research Associates, San Antonio, TX; and G. Crowley

- 5:00 PM 3.5 [Radiation belt data assimilation with an ensemble Kalman filter](#)  
Josef Koller, LANL, Los Alamos, NM; and R. H. W. Friedel, G. D. Reeves, and Y. Chen
- 5:15 PM 3.6 [Capabilities and Limitations of Ensemble Data Assimilation](#)
Jeffrey Anderson, NCAR, Boulder, CO
- 5:30 PM 3.7 [An "observation-nudging"-based FDDA for WRF-ARW for mesoscale data assimilation and forecasting](#)  
Yubao Liu, NCAR, Boulder, CO; and A. Bourgeois, T. Warner, and S. Swerdlin

5:30 PM-7:30 PM, Monday, Exhibit Hall D
 Formal Opening of Exhibits with Reception (Cash Bar)

5:30 PM, Monday
 Sessions end for the day

Tuesday, 16 January 2007

8:30 AM-10:00 AM, Tuesday, 210A
[Session 4 New Data Sources and Products](#)

Chairs: Robert McCoy, Office of Naval Research, Arlington, VA; Genene Fisher, AMS Policy Program, Washington, DC

- 8:30 AM 4.1 [Detecting equatorial plasma bubbles with GPS phase scintillation](#)
Angeline G. Burrell, AER, Lexington, MA; and M. Colerico and G. M. Gugliotti Fishman
- 8:45 AM 4.2 [Global measurement of the energetic ion precipitation from the storm time ring current using ENAs](#)
Craig J. Pollock, Southwest Research Institute, San Antonio, TX; and J. M. Jahn and A. Isaksson
- 9:00 AM 4.3 [Space Weather Effects of the Earth's Plasmasphere](#)
Jerry Goldstein, Southwest Research Institute, San Antonio, TX; and B. R. Sandel
- 9:15 AM 4.4 [Characterization of the Near-Earth Environment to provide an Ionospheric Specification for use in operational impact assessments](#)
Gina M. Gugliotti Fishman, AER, Lexington, MA; and N. A. Bonito, K. M. Farnham, and B. W. Sheeley
- 9:30 AM 4.5 [Mid-latitude electron density gradients and their impact on GPS signal strength](#)
M. J. Colerico, AER, Lexington, MA; and N. A. Bonito, A. G. Burrell, and B. Reinisch
- 9:45 AM 4.6 [Midlatitude Ionospheric Effects of SAPS Electric Fields](#)
Geoff Crowley, Atmospheric & Space Technology Research Associates, San Antonio, TX; and T. Garner, A. D. Richmond, and R. G. Roble

9:45 AM-11:00 AM, Tuesday, Exhibit Hall C
 Formal Poster Viewing with Coffee Break

11:00 AM-6:00 PM, Tuesday, Exhibit Hall D

Exhibits Open

11:00 AM-12:00 PM, Tuesday, 210A

[Session 5 Constellation Observing System for Meteorology, Ionosphere and Climate \(COSMIC\)](#)

Chairs: Robert McCoy, Office of Naval Research, Arlington, VA; Genene M. Fisher, AMS, Washington, DC

- 11:00 AM 5.1 [Early Results of Ionospheric Measurements from the FORMOSAT-3/COSMIC Mission](#)
Stig Syndergaard, UCAR, Boulder, CO; and C. Rocken, W. S. Schreiner, and D. C. Hunt
- 11:15 AM 5.2 [Tiny Ionospheric Photometer science program, data products, and operations on COSMIC](#)
Scott A. Budzien, NRL, Washington, DC; and K. F. Dymond, D. H. Chuah, and C. Coker
- 11:30 AM 5.3 [JPL/USC GAIM 4DVAR: Using COSMIC Occultations To Estimate Ionospheric State and Drivers in Near Real-Time](#)
Brian Wilson, JPL, Pasadena, CA; and V. Akopian, L. Mandrake, X. Pi, C. Wang, and G. Hajj
- 11:45 AM 5.4 [Autonomous space-based radio monitors of the ionosphere](#)
Paul A. Bernhardt, NRL, Washington, DC; and C. L. Siefring


12:00 PM-1:30 PM, Tuesday

Lunch Break

1:30 PM-3:00 PM, Tuesday, 210A

[Session 6 new developments with physics-based forecast models](#)

Chairs: Joseph Kunches, NOAA/Space Environment Center, Boulder, CO; Dean Pesnell, NASA, Greenbelt, Maryland

- 1:30 PM 6.1 [Extending NOGAPS-ALPHA into the lower thermosphere](#)
David E. Siskind, NRL, Washington, DC; and S. Eckermann, J. P. McCormack, L. Coy, and T. F. Hogan
- 1:45 PM 6.2 [Chaotic divergence in a whole-atmosphere climate model](#)
Han-Li Liu, NCAR, Boulder, CO; and F. Sassi, R. R. Garcia, and B. A. Boville
- 2:00 PM 6.3 [Bridging terrestrial and space weather: A new coupled general circulation model \(GCM\) of Integrated Dynamics through Earth's Atmosphere \(IDEA\)](#) 
Rashid A. Akmaev, CIRES/Univ. of Colorado, Boulder, CO; and T. J. Fuller-Rowell, N. Maruyama, F. Wu, M. D. Iredell, S. Moorthi, and H. Juang
- 2:15 PM 6.4 [Modeling equatorial spread F: New simulation results](#)
J. D. Huba, NRL, Washington, DC; and G. Joyce
- 2:30 PM 6.5 [Three dimensional space weather maps of large electron density gradients during magnetic storms obtained from Ionospheric Data Assimilation Three-Dimensional \(IDA3D\)](#)
Gary S. Bust, Atmospheric & Space Technology Research Associates, San Antonio, TX; and G. Crowley



2:45 6.6 [Measurement of Ionospheric Wave Parameters Using An HF Doppler System](#)
 PM **Geoff Crowley**, Atmospheric & Space Technology Research Associates, San Antonio, TX

3:00 PM-3:30 PM, Tuesday, Exhibit Hall D
 Coffee Break in Exhibit Hall

3:30 PM-5:45 PM, Tuesday, 210A
[Session 7 Advances in Space Weather](#)

Chairs: Joseph Kunches, NOAA/Space Environment Center, Boulder, CO; Robert McCoy, Office of Naval Research, Arlington, VA



3:30 7.1 [Report of Assessment Committee on National Space Weather Program](#)
 PM **Louis J. Lanzerotti**, New Jersey Institute of Technology, Newark, NJ

4:00 7.2 [Fractal statistics of Sun and IMF, a practical storm prediction tool](#)  
 PM **Donald E. Cotten**, City University of New York, Bayside, NY; and T. D. Cheung, P. J. Marchese, G. Tremberger, L. P. Johnson, S. A. Austin, G. Brathwaite, M. Chow, L. Corrales, J. Espinoza, and K. Leon

4:15 7.3 [New Low-cost Microsatellites for Possible Space Weather Applications](#)
 PM **Robert McCoy**, Office of Naval Research, Arlington, VA

4:30 7.4 [Space science inputs to spacecraft design and anomaly resolution for high altitude spacecraft.](#)
 PM **Thomas Paul O'Brien III**, The Aerospace Corporation, Chantilly, VA; and J. Mazur and C. Tschan

4:45 7.5 [The SECCHI Experiment on the STEREO Mission](#)
 PM **Simon P. Plunkett**, NRL, Washington, DC; and R. A. Howard, J. D. Moses, A. Vourlidas, D. G. Socker, J. S. Newmark, J. W. Cook, J. Davila, J. Lemen, R. A. Harrison, C. J. Eyles, and J. M. Defise

5:00 7.6 [Space Weather and the Incidence of Reactive "Off-Cost" Operations in the PJM Power Grid](#)  
 PM **Kevin F. Forbes**, Catholic Univ., Washington, DC; and C. St Cyr

5:15 7.7 [Polar Mesospheric Cloud Prediction and Observation](#)
 PM **Michael J. Kendra**, AER, Lexington, MA; and J. M. Griffin

5:30 7.8 [Study of tropospheric turbulence using observation of shadow bands during a total solar eclipse](#)
 PM **Hari Om Vats**, Physical Research Laboratory, Ahmedabad, Gujarat, India

5:45 PM, Tuesday
 Symposium Ends

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