

**United Nations / Austria Symposium on
Data Analysis and Image Processing for Space Applications
and Sustainable Development: Space Weather Data**

Final Draft Programme

**Austrian Academy of Sciences, Institute for Space Research
Schmiedlstrasse 6, Graz, Austria**

Hosted by the Austrian Federal Ministry for European and International Affairs,
State of Styria and City of Graz
and co-sponsored by the European Space Agency

18 - 21 September 2012

(as of 12 September)

Honorary Committee (in alphabetical order, as of June 2012):

H. Böck	Federal Ministry for European and International Affairs, Austria
F. Nordlund	European Space Agency, France
K. Edlinger-Ploder	Member of the Government, State of Styria, Austria
S. Nagl	Mayor, City of Graz, Austria
M. Othman	Director, Office for Outer Space Affairs, United Nations
F. Voves	Governor, State of Styria, Austria

Programme Committee (in alphabetical order):

J. Davila	NASA
C. Stix-Hackl	Federal Ministry for European and International Affairs, Austria (Chairman of the Programme Committee)
L. Czarán	Office for Outer Space Affairs, United Nations
J. Head	U. S. Department of State
O. Koudelka	JOANNEUM RESEARCH and Graz University of Technology, Austria
J. Ortner	EURISY, Austria
W. Riedler	Austrian Academy of Sciences, Austria
M-E. De Vel	European Space Agency, France

Local Organizing Committee (in alphabetical order –as of June 2012):

A. Edler	JOANNEUM RESEARCH
A. Fuchs-Fehringner	Graz Tourism
G. Haubenhöfer	City of Graz
B. Kössler	JOANNEUM RESEARCH
O. Koudelka	JOANNEUM RESEARCH
W. Riedler	Austrian Academy of Sciences (Chairman)
A. Rupprecht	State of Styria

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Tuesday, 18 September 2012

Morning

08:00 **Registration**

09:00 **Opening Ceremony**

Master of Ceremony (W. Riedler, Austrian Academy of Sciences)

- 09:10 Welcome / Opening Remarks
- *Helmut O. Rucker, Austrian Academy of Sciences*
 - *Juha-Pekka Luntama, European Space Agency*
 - *Peter Piffel-Percevic, City of Graz*
 - *Martin Kraemer, Austrian Federal Ministry for European and International Affairs (Permanent Mission to the UN)*
 - *Luc St.-Pierre, United Nations Office for Outer Space Affairs*

10:00 **Keynote Addresses, Introduction**

Chairperson: Luc St.-Pierre, United Nations Office for Outer Space Affairs

10:00 Keynote: An Introduction to Space Weather
Davila, Joseph, NASA/GSFC

10:30 Keynote: Opening of the International Center for Space Weather Science and Education (ICSWSE) of Kyushu University
Yoshikawa, Akimasa, ICSWSE Japan

11:00 *Coffee/Tea Break*

11:30 Keynote: ESA SSA-SWE Segment Perspectives of Space Weather Observations
Luntama, Juha-Pekka, ESA SSA-SWE

12:00 Objectives of the 2012 Symposium Information and Symposium Logistics, Future Symposium Series Plans
Czaran, Lorant, United Nations Office for Outer Space Affairs

12:20 *Lunch*

Afternoon

13:30 **Session 1: Worldwide Instrument Arrays, Data Products**

Chairperson: Johannes Ortner

Rapporteur:

13:30 Keynote: Space Weather: Historical Perspectives and the Northern Lights
Brekke, Pål, Norwegian Space Centre

14:00	An Overview of the UN Basic Space Science Initiative (IHY, ISWI, Instrument Arrays), Future Plans	<i>Haubold, Hans, UNOOSA</i>
14:30	Contributions of IHY and ISWI to Africa: Scientific Results and Infrastructural Development	<i>Rabiu, A.B., NASDRA Nigeria</i>
14:50	<i>Coffee/Tea Break</i>	
15:20	Identification of Night-time F-Region Currents from CHAMP Satellite Observations Over Equatorial Africa.	<i>Adero, A., Kenya Polytechnic University</i>
15:40	Estimating the geo-effectiveness of halo CMEs from associated solar and IP parameters using neural networks	<i>Uwamahoro, Jean Kigali Institute of Education, Rwanda</i>
16:00	Space Weather on Extrasolar Planetary Systems	<i>Hanslmeier, Arnold, University of Graz, Austria</i>
16:20	Discussion on Space Weather Data and Analysis, Needs, Expected Symposium Outcomes; Conclusions	<i>All participants</i>
17:15	<i>Transfer to the hotel</i>	
19:00	<i>Transfer from the hotel to the "Burgring" (centre of Graz)</i>	
19:30	<i>[Reception hosted by the Governor of the State of Styria F. Voves (Weisser Saal at the Grazer Burg)]</i>	

Wednesday, 19 September 2012

Morning

09:00	<u>Session 2: Data Access and Analysis, Tools</u> <i>Chairperson: Hans Haubold, , United Nations Office for Outer Space Affairs</i> <i>Rapporteur:</i>	
09:00	Analysing Data about Radiation Effects on Electronics	<i>Beck, Peter, AIT Vienna, Austria</i>
09:30	Solar wind influence on planetary radio emission	<i>Panchenko, Mykhaylo, Space Research Institute Graz, Austria</i>

10:00	Stereoscopic Observations of solar Type III radio bursts in the outer corona	<i>Boudjada, Mohammed, Space Research Institute Graz, Austria</i>
10:30	<i>Coffee/Tea Break</i>	
11:00	IRI-2007 FOF2 Predictions at Ouagadougou Station During Quiet Time Periods From 1985 to 1995	<i>Ouattara, Frederic, Burkina Faso</i>
11:20	Multi-wavelength investigation of coronal holes and associated solar wind flows	<i>Shugay, Yulia, Russia</i>
11:40	The Importance of Satellite Data in Space Weather Modelling	<i>Ogunmodimu, Olugbenga, Nigeria</i>
12:00	Data Analysis of Ground-based Observations	<i>Poetzi, Werner, Kanzelhoehe Observatory/University of Graz, Austria</i>
12:20	<i>Lunch</i>	
	<i>Afternoon</i>	
13:30	<u>Session 3: Data Access and Analysis, Tools</u> <i>Chairperson: Lorant Czarán, United Nations Office for Outer Space Affairs</i> <i>Rapporteur:</i>	
13:30	Standard Deviation Analysis vs. Diffusion Entropy Analysis	<i>Haubold, Hans, UNOOSA</i>
14:00	The „Key-Players“ of Space Weather	<i>Nakamura, Rumi, Space Research Institute Graz, Austria</i>
14:20	Signatures of Anatolian Bump in ITNE - CIDR of Egypt	<i>Mahrous, Ayman, Egypt</i>
14:40	Investigating Latitudinal-Dependence of the Time Response of the Ionosphere to Geomagnetic Activity	<i>Abdulrahim, R.B, Nigeria</i>
15:00	<i>Coffee/Tea Break</i>	
15:30	Electric field Anomalies in the Mid Latitude Ionosphere: Possible Connection With Earthquakes	<i>Danov, Dimitar, Bulgaria</i>
15:50	Studies of OI 630.0 nm Night Airglow and GPS-TEC Observations During the Geomagnetic Storm of November 20, 2003	<i>Shetti, D.J., India</i>
16:10	<u>Short Presentation:</u> Effects of Severe Space Weather on Man and Environment	<i>Akinola, B, Nigeria</i>
16:25 – 17:00	Discussion; Conclusions for the day	<i>All Participants</i>

18:00 *Transfer from the hotel to the "Andreas-Hofer-Platz" (centre of Graz)*

19:00 *[Reception hosted by the Mayor of the City of Graz S. Nagl (Rathaus)]*

Thursday, 20 September 2012

Morning

9:00 **Session 4: Hands-on Training in Data Analysis Tools, Data Access**

- Kyushu University on data analysis

- Graz TU/Observatory on STEREO, other Image Processing – TBC

- Other tools TBC

10:30 *Coffee/Tea Break*

11:00 Hands-on Workshop continues

12:30 *Lunch*

Symposium Participants can register for short presentations about their work (a sign-up list will be made available)

Afternoon

13:30 **Session 5: Hands-on Training in Data Analysis Tools, Data Access (Continued)**

13:30 Hands-on Workshop, Conclusions

15:00 *Coffee/Tea Break*

15:30 Automated image processing and Data Analysis for Space Applications

Kampengele, Mumba Dauti, Ndola, Zambia

15:50 Short Presentation: Update on Space Weather Activities in Croatia

Fijar, Renato, Croatia

16:05 Short Presentation: Iraq Space Weather Activities

Awnar, Azhar, Iraq

16:20 **Short Presentation:**

TBC

16:35 **Short Presentation:**

TBC

16:40 Discussions; Conclusions for the day

17:30 *Transfer to the Centre of Graz*

18:00 *Guided tour through the City*

19:30 *Hosted Dinner at Restaurant iKu*

Friday, 21 September 2012

Morning

9:00 Session 6: Review of Analytical Products and Their Benefits; Recommendations

Chairperson: Otto Koudelka, Joanneum Research

Rapporteur:

9:00 Q&A, Discussion on Symposium
Outcomes, Recommendations

10:30 *Coffee/Tea Break*

11:00 **Other Short Presentation(s) (TBC)**

11:15 Discussion continued

12:00 *Lunch*

Afternoon

13:30 Session 7: Way Forward, Objectives for Next Symposium(s)

Chairperson: Lorant Czarán, United Nations Office for Outer Space Affairs

Rapporteur:

13:30 Symposium Final Review, *All Symposium Participants*
Recommendations List and Short
Discussion on Future Objectives

15:00 *Coffee/Tea Break*

15:30 Closing Session

Master of Ceremony of Austrian Academy of Sciences

Distribution of Certificates and
Closing Remarks by the organizers

○ **Austrian Federal Ministry for European
and International Affairs**

○ *United Nations Office for Outer Space
Affairs*

16.30 *Transfer to the hotel and end of the
Symposium*