

Space Weather Working Team Plenary Meeting 31

Wednesday 13 June 2012, 09:30-17:00

Royal Observatory of Belgium, room: la salle méridienne, Brussels, Belgium

1. Welcome and Introduction

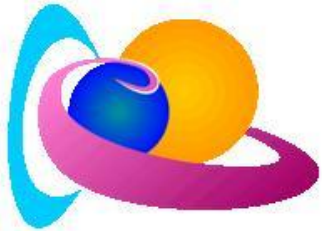


Credits: ESA

<http://stce.be/>

STCE Newsletter

28 May 2012 - 3 Jun 2012



Published by the STCE - this issue : 8 Jun 2012.

The Solar-Terrestrial Centre of Excellence (STCE) is a collaborative network of the Belgian Institute for Space Aeronomy, the Royal Observatory of Belgium and the Royal Meteorological Institute of Belgium.

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8.New documents ...

9.Future Events

1. Venus transit, June 6
2. The RMI at Princess Elisabeth station - First results of the research on atmospheric composition
3. Review of solar activity (28 May 2012 - 3 Jun 2012)
4. Review of geomagnetic activity (28 May 2012 - 3 Jun 2012)
5. Noticeable Solar Events (28 May 2012 - 3 Jun 2012)
6. Humain Observations (28 May 2012 - 3 Jun 2012)
7. Geomagnetic Observations at Dourbes (28 May 2012 - 3 Jun 2012)
8. New documents in the European Space Weather Portal Repository
9. Future Events

SWWT Plenary 31 Agenda

1. Welcome and Introduction

PART 1: REVIEW OF GENERAL ITEMS

2. Review Main Events since SWWT Plenary Meeting 30 (Norma Crosby)

3. SWWT Topical Working Groups Highlights & Updates (Norma Crosby et al.)

4. SWWT Terms of Reference (Norma Crosby and Alexi Glover)

5. Overview of SSA PP in 2012 - Achievements and plans for the next Period (Juha-Pekka Luntama)

6. Combining Expertise and Services - What makes an ESC? (Alexi Glover + some time for discussion)

7. Action Item Review (Norma Crosby)

PART 2: OPEN DISCUSSION

8. SN-I: Space Weather Segment Precursor Services - Part-1: Definition and Service Consolidation – A summary of the project goals, results, and the role of the user community. (Gareth Lawrence (RHEA System SA) and the SN-I Consortium) – 20-30 min.
9. FP7 SWIFF and EHEROES Projects (Giovanni Lapenta) – 20-30 min.
10. VSWMC Project (Stefaan Poedts) – 15 min.
11. PC index (Peter Stauning) – 15 min.
12. Sunspot Workshop: Main Highlights (Frederic Clette and Laure Lefevre) – 15 min.
13. Space Weather Activities in Ukraine: Summer 2012 Report (Aleksei Parnowski) - 10 min.

PART 3: THE FUTURE

14. Upcoming Events
15. ESWeP (Stijn Calders)
16. SWWT Roadmaps Discussions (Norma Crosby)
17. Upcoming Calls (FP7, FP8, ESA ITTs)
18. Handing over the leadership to the next SWWT Chair
19. Visions for the future of the SWWT (next SWWT Chair)
20. Closing Words

ESA Space Weather Working Team (SWWT)

- The SWWT is a forum open to European experts in a variety of both scientific and application oriented fields relating to space weather.
- The SWWT plays an important role in advising ESA in space weather strategy and acts as a forum for discussion amongst the European space weather community.
- The SWWT is responsible for promoting coordinated European space weather activities at both national and industry levels.
- The SWWT seeks to identify and discuss potential collaborations and/or synergies with other structures or organisations such as the EC FP7 & COST programmes and others.

- The SWWT consists of the SWWT Community, a Steering Board, and a Chair
- SWWT Topical Working Groups
- SWWT membership is open to representatives of any institute or private company currently undertaking space weather related activities.
 - Contact: Mike Hapgood [mike.hapgood AT stfc.ac.uk]
- For more information:

http://www.esa-spaceweather.net/spweather/esa_initiatives/swwt/index.html

<http://spaceweather.eu/en/swwt>

PART 1: REVIEW OF GENERAL ITEMS

2. Review Main Events since SWWT Plenary Meeting 30
3. SWWT Topical Working Groups Highlights & Updates
4. SWWT Terms of Reference
5. Overview of SSA PP in 2012 - Achievements and plans for the next Period
6. Combining Expertise and Services - What makes an ESC?
7. Action Item Review

2. Review Main Events since SWWT Plenary 30

Meetings:

- “Space Weather Working Team Plenary 30”, 30 Nov. 2011, Namur, Belgium.
- “Space Weather Working Team Steering Board meeting”, 30 Nov. 2011, Namur, Belgium.
- “ESWW8 meeting”, 28 Nov. – 2. Dec. 2011, Namur, Belgium
- “EGU2012”, 22 – 27 April 2012, Vienna, Austria [Many space weather related activities]
- “Space Weather Workshop”, 24-27 April 2012, Boulder, CO, U.S.A.
- “Space Weather Effects on Humans: in Space and on Earth”, 4-8 June 2012, Moscow, Russia

3. SWWT Topical Working Groups Highlights & Updates

(Norma Crosby et al.)

SWWT Topical Working Groups

1. Drivers of Space Weather (e.g. solar, S-T, including future missions and instrumentation)
2. Ground Effects (GIC, prospecting, tourism)
3. Atmospheric Effects (incl. Drag)
4. Ionospheric Effects
5. Spacecraft, Launcher and Aircraft Environments
6. Education, Outreach and Emerging Markets

Drivers of Space Weather (e.g. solar, S-T, including future missions and instrumentation)

1. Subgroup 1: Solar Magnetic Energy, spokesperson: H. Lundstedt (IRF)
2. Subgroup 2: Solar Storms (Solar Flares, CMEs, SEP events), spokespersons: N. Vilmer (Paris Observatory) and O. Malandraki (NOA)]

COST (European Cooperation in Science and Technology) is one of the longest-running European frameworks supporting cooperation among scientists and researchers across Europe.



Anna BELEHAKI, Chair of the COST ES0803 Action

- After 4 years of successful implementation, the Action ends in Nov. 2012. The main scientific achievements, concerned with: an overview of the performance of existing Space Weather research and operational models; recommendation for their validation; the stimulation of models' upgrades for predicting important Space Weather parameters; recommendations for new space weather products and services.
- The Action is one of the largest in ESSEM (Earth System Science and Environmental Management) Domain with the participation of 24 COST countries, 6 non-COST institutes and more than 80 experts.
- Four workshops have been organised from 2009 to 2012 aimed at: the organisation and coordination of the work in each group (Frascati 2009); the development of close links with users of space weather data and products, to upgrade existing catalogs of their needs for new products (Paris 2010); the assessment and validation of space weather models (Alcala 2011); the detailed discussion of the final results (Prague 2012).

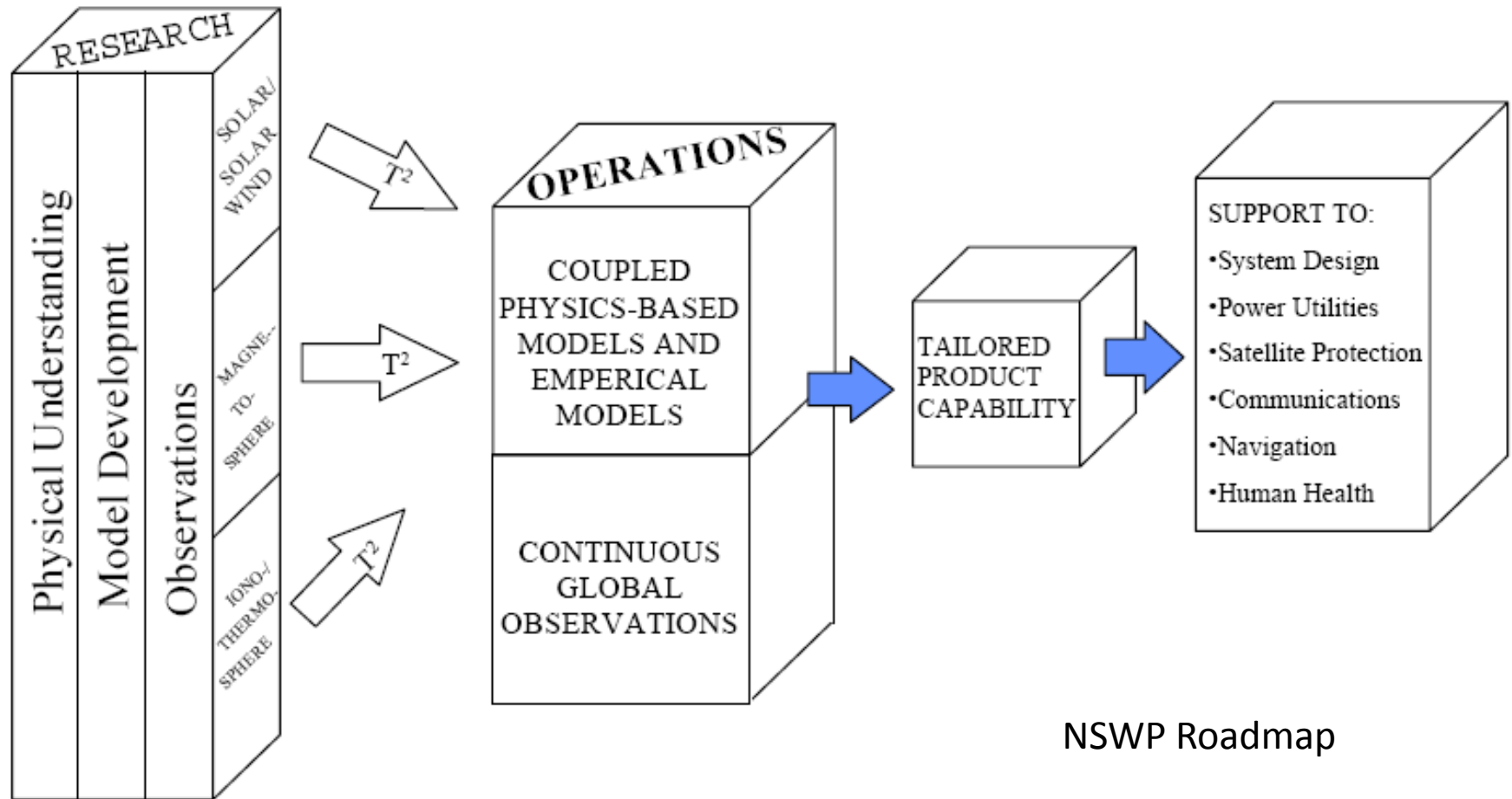
- Our Action co-organised two international training schools, in ICTP in 2010 and in Spineto, Tuscany in 2012.
- Our Action co-organised three European Space Weather Weeks (2009 – 2011), in collaboration with ESA and STCE, and we are working for the next ESWW9 that will be held in Brussels from 5 to 9 Nov. 2012, in conjunction with the COST ES0803 final event. ESWWs are now international events attracting a large number of participants from the academic and commercial sector.
- Our Action has created the international peer review open access scientific Journal of Space Weather and Space Climate (SWSC) published with EDP Sciences. The journal accepts submissions (<http://www.swsc-journal.org/>) since 2011 and first papers are already published.



- For more information: <http://www.costes0803.noa.gr/>

As research provides sufficiently mature knowledge, the new information is adapted for operational use through a well-planned and well-executed technology transfer (T^2) process.

National Space Weather Program Implementation Plan, 2nd Edition, July 2000,
<http://www.ofcm.gov/>



NSWP Roadmap

Ground Effects (GIC, prospecting, tourism)

Spokesperson: M. Wik (NeuroSpace)

- “Ground Effects Topical Group” by Magnus Wik (to be given by L. Trichtchenko)
- “Recent developments in Space Weather services in Canada and South Africa.” by Larisa Trichtchenko

Atmospheric Effects (incl. Drag)

Spokesperson: S. Bruinsma (CNES)

- “Atmospheric Effects Topical Group: Reporting period: 2011 – June 2012” by Sean Bruinsma (to be given by N. Crosby)

Ionospheric Effects

Spokesperson: M. Angling (University of Birmingham and QinetiQ)

- “Ionospheric Effects Working Group” by Matthew Angling (to be given by N. Crosby)

Spacecraft, Launcher and Aircraft Environments

Spokesperson S. McKenna-Lawlor (STIL)

Co-spokespersons F. di Marco (VEGA) and G. Reitz (DLR)

- “Spacecraft, Launcher and Aircraft Environments” by Susan McKenna-Lawlor

Education, Outreach and Emerging Markets (EOEM)

Spokesperson: N. Crosby (BIRA-IASB)

- “EOEM June 2012 report” by Norma Crosby

Main objectives of the Education, Outreach and Emerging Markets (EOEM) Topical Working Group are:

- Education (primary to university), both formally (e.g. schooling, textbooks, etc.) and informally (e.g. museums, webcasts, etc.) services.
- Public outreach activities (e.g. TV/radio programs, popular books, etc.).
- Emerging space weather markets by acting as umbrella for markets until they are “mature enough” to have a topical group of their own in the context of a European space weather program.

The EOEM topical group specifically considers potential future space weather markets. The possible effects of space weather on the health of humans on Earth is one such topic. This is being considered in connection with space weather induced health effects on humans in space.

8th European Space Weather Week

Nov. 28 – Dec. 02, 2011 - Namur, Belgium

“Space Weather Effects on Humans in Space and on Earth” splinter meeting organised by N. Crosby (BIRA-IASB), T. Breus (Space Research Institute RAS)



The goal of this 2-hr splinter meeting was to present and further identify the differences and similarities between space weather induced health effects in space as well as on Earth. Three types of approaches were considered:

1. Research conducted on humans onboard orbiting space stations and spacecraft,
2. Ground based observations of health effects,
3. Experimental studies simulating the complex nature of conditions in space.

Welcome and Introduction

<http://swh2012.cosmos.ru/>



 English
 Русский

About the Conference

Space Weather Effects on Humans: in Space and on Earth

International Conference

Space Research Institute
Moscow, Russia
June 4-8, 2012

During the last thirty years there has been steady progress in our understanding of the influence that space weather has on the state of human health both in Space and at Earth. This development is mainly based on research conducted on humans onboard space stations and

[About the Conference](#)

[Important Dates](#)

[Organizing Committee](#)

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EGU2012, 22-27 April 2012, Vienna, Austria

Thursday, 26 April 2012:

Press Conference 9: “Space weather effects and forecasting”

Participants:

- Norma Crosby, Belgian Institute for Space Aeronomy, Belgium
- Andrzej Krankowski, University of Warmia and Mazury in Olsztyn, Poland
- Manuel Grande, Aberystwyth University, UK

Friday, 27 April 2012:

Session ST5.1/NH1.10/PS5.5 (oral and poster)

Space Weather and its Effects on Terrestrial and Geo-Space

Environments: Science and Applications (co-organised)

Convener: V. Pierrard | Co-Conveners: H. Rothkaehl , N. Crosby, M. Menvielle

“I LOVE MY SUN” initiative:

- <http://www.ilovemysun.org/>
- “The COST Example for International Collaborative Outreach to the General Public: I Love My Sun” by Yurdanur Tulunay, Norma B. Crosby, Ersin Tulunay, Stijn Calders, Aleksei Parnowski, Desanka Sulic (submitted to Journal of Space Weather and Space Climate Special Issue on “Results from COST Action ES0803”)

“Five Centuries of Exploration: From Distant Shores to Distant Planets” by Crosby, N. B., I. Van den Bergh, R. Bollen, J. Brabants, J. Cops, Y. Dillen, C. Doomen, J. Lambrechts, T. Stulens, T. Aäron, L. Vanlaer, and S. Vinkesteijn (Space Weather: The International Journal of Research and Applications, Vol. 10, S03007, 7 pp., 2012)

Solar Storms and Northern Lights at Winton Crucible

[Home](#) » [The Times Cheltenham Science Festival](#) » [S96 Solar Storms And Northern Lights](#)



S96 SOLAR STORMS AND NORTHERN LIGHTS

Saturday, June 16, 2012 - 12:30

The sun is not a quiet place; it is stormy and ever-changing. With beautiful images and videos solar physicist **Pål Brekke** from the Norwegian Space Centre introduces us to solar storms and the Northern Lights. Explore how the sun creates a light display so spectacular and yet hazardous for our technology-based society and for humans in space.

4. SWWT Terms of Reference

Four Updates

1. Start of ESA Parallel Studies (1999).
2. When the SWWT became open to the wider European space weather community, during the Space Weather Pilot Project (2003).
3. Creation of SWWT Steering Board (2006).
4. Start of the ESA SSA Preparatory Programme (2009).

5. Overview of SSA PP in 2012 - Achievements and plans for the next Period

(Juha-Pekka Luntama)

6. Combining Expertise and Services - What makes an ESC?

(Alexi Glover + some time for discussion)

7. Action Item Review

AI M26/1:NC, AG, HL – Coordination of the Fundamental Research topical group with the ongoing Cost Action ES0803 in regard to science to applications. [DONE]

AI M26/2:NC/AG to send out contact information for Steering Board to SWWT mailing list. Prior to this the individual Steering Board members will be asked if they agree to have their contact details listed on the SWWT web-page:

http://www.esa-spaceweather.net/spweather/esa_initiatives/swwt/index.html
[DONE]

AI M26/3:NC to add FP8 to the agenda of next SWWT plenary meeting. [DONE]

AI M26/4: AG and Ronald Van der Linden to find out what has happened to the UN activity: “Outline document on Long-Term Sustainability of Space Activities” and whether there could be a link between this and the SWWT initiative. [DONE]

AI M27/1: Ioanna Tsagouri, Anna Belehaki, Alexi Glover, Sean Bruinsma, Daniel Heynderickx, Jens Rodmann and Norma Crosby to write up a resumé concerning the COST Action ES0803 metric activity. [DONE]

AI M28/1: The white paper on the SSA preparatory programme is open for feedback from the SWWT community. [DONE]

AI M29/1: Following discussion, the SWWT recommends to ESA to make available to the community the SN-I list of assets document.
[ONGOING]

AI M29/2: Stijn Calders to create an archive for relevant documents of the SWWT Spacecraft, Launcher and Aircraft Environments Topical Group. [DONE]

AI M29/3: NC to investigate with Stijn Calders and Michel Kruglanski the possibility of having a joint calendar for example via the ESWeP.
[DONE]

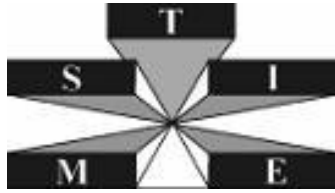
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14. Upcoming Events



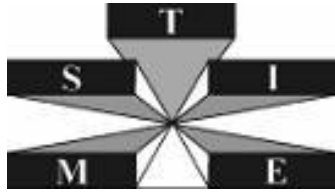
Oslo Conference 2012

Space Weather and Challenges for Modern Society

Oslo 22 – 24 - October 2012



(Sponsors and Supporters)



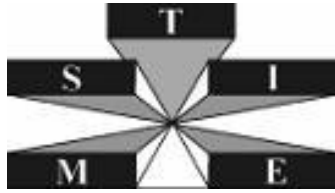
Oslo Conference 2012

Who should attend?

- Political and administrative decision makers
- Researchers in the field
- Risk management specialists
- Relevant vulnerable industry representatives
- Authorities
- Insurance industry
- ... and others who want to increase their general and specific knowledge on space weather.



(Sponsors and Supporters)



Oslo Conference 2012

- Poster Deadline: **June 30th 2012**
- Regular Rate registration is open and valid until **1st September 2012**

- For more information:

<http://www.tiems.info/about-tiems/oslo-conference-2012.html>



(Sponsors and Supporters)

http://spaceweather.eu/en/event/future

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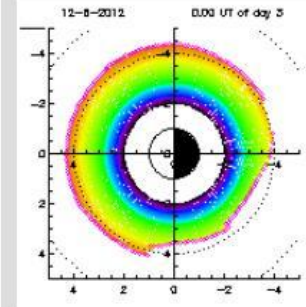
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Future Events

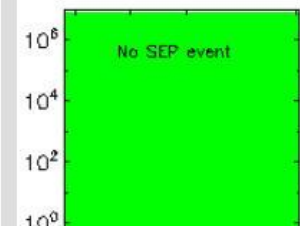
Title	Start Date	End Date
Solar Wind 13 in Hawaii, USA	17-Jun-2012	22-Jun-2012
Toulouse Space Show (France)	25-Jun-2012	28-Jun-2012
SHINE Conference 2012 in Wailea Maui, Hawaii	25-Jun-2012	29-Jun-2012
European Week of Astronomy and Space Science in Rome, Italy	01-Jul-2012	06-Jul-2012
International Summer School "Solar Astrophysics: Modern trends and techniques" in Bogota, Colombia	03-Jul-2012	19-Jul-2012
BUKS2012 in Fodele Beach, Crete, Greece	04-Jul-2012	07-Jul-2012
23rd NASA Space Radiation Investigators' Workshop in Durham, North Carolina (USA)	08-Jul-2012	11-Jul-2012
ESOF 2012 in Dublin, Ireland	11-Jul-2012	15-Jul-2012
39th COSPAR Scientific Assembly in Karnataka, India	14-Jul-2012	22-Jul-2012
CISM Summer School in Boulder (USA)	16-Jul-2012	27-Jul-2012

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Plasmasphere density



SEP event forecast



Ninth European Space Weather Week, 5 – 9 Nov. 2012 Brussels, Belgium

Deadline for abstract submission is June 30, 2012

<http://www.sidc.be/esww9/>



15. ESWeP

(Stijn Calders)

16. SWWT Roadmaps Discussions

This “SWWT Roadmaps” document:

- represents community inputs
- is a live document
- is updated as a function of developments in the community.

17. Upcoming Calls (FP7, FP8, ESA ITTs)

Next (last) FP7 Space Call 6 [July 2012; Possibility for space weather topic to be included]

Space FP7 Work Programme 2013:

http://ec.europa.eu/enterprise/policies/space/research/fp7-call-for-proposals/index_en.htm

Area 9.2.3: Research into reducing the vulnerability of space assets

SPA.2013.2.3-01: Space-weather events

SPA.2013.2.3-02: Security of space assets from in-orbit collisions – mission concepts

Next Framework Programme FP8: 2014-2020

18. Handing over the leadership to
the next SWWT Chair

&

19. Visions for the future of the
SWWT (next SWWT Chair)

SPACE WEATHER

is an **application-oriented discipline** and **addresses the needs of “users”**.

SOLAR-TERRESTRIAL PHYSICS	SPACE WEATHER
- Basic Research	- Application Oriented
- Scientific Observations	- Continuous Monitoring
- Scientific Products	- Service Products

Important to note: **basic research** in the field of Solar-Terrestrial Physics is **necessary for Space Weather applications**.

20. Final Words