

Space Weather Working Team Plenary Meeting 31 Report

Wednesday, 13 June 2012, 09:30 to 18:30

Royal Observatory of Belgium, Brussels, Belgium

Prepared by Norma Crosby, 26 June 2012

The SWWT Plenary 31 Meeting was held on Wednesday 13 June 2012 at the Royal Observatory of Belgium. Acting as Chair for the last time Norma Crosby convened the meeting with Alexi Glover as ESA contact. At the end of the meeting the SWWT Chair leadership was handed over to Stefaan Poedts. The meeting was attended by more than 25 people (see Annex for list of participants).

The meeting was divided into three main parts:

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 2012 - SWE 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)
9. FP7 SWIFF and EHEROES Projects (Giovanni Lapenta)
10. Virtual Space Weather Modelling Centre – Phase 1 (Stefaan Poedts)
11. The Polar Cap PC Indices (Peter Stauning)
12. Sunspot Workshop: Main Highlights (Frederic Clette and Laure Lefevre)
13. Space Weather Activities in Ukraine: Summer 2012 Report (Aleksei Parnowski)

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

[1.] Welcome (Norma Crosby)

Norma Crosby (NC) welcomed the participants to the 31st SWWT Plenary Meeting. She acknowledged the Royal Observatory of Belgium for providing a room for this meeting, as well as the Solar Terrestrial Centre of Excellence (STCE) for lunch. She recalled the STCE website address (<http://stce.be/>) and highlighted the STCE electronic newsletter that is sent out regularly (to subscribe: <http://stce.be/newsletter/newsletter.php>).

STCE Newsletter

28 May 2012 - 3 Jun 2012



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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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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

Thereafter NC presented the final meeting agenda.

This was followed by a short introduction to the ESA Space Weather Working Team for those participants not familiar with its background. It was mentioned that Mike Hapgood remains as contact person for new memberships to the SWWT [email: mike.hapgood AT stfc.ac.uk].

For more information about SWWT, including presentations from the current meeting, as well as minutes and presentations from previous SWWT Plenary meetings see: (http://www.esa-spaceweather.net/spweather/esa_initiatives/swwt/index.html).

PART 1 – REVIEW OF GENERAL ITEMS

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

NC presented some of the main SWWT related events occurring since the SWWT Plenary Meeting in Nov. 2011.

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.
- “2nd Sunspot Number Workshop”, 21 – 25 May 2012, SIDC, Royal Observatory of Belgium, Brussels, Belgium
- “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)

NC explained the objective of having various SWWT Topical Working Groups (TWGs).

At the Nov. 2011 SWWT Plenary meeting it was noted by NC that there would be changes in the some of the TWGs in the near future (e.g. title of TWG, structuring of TWG, name of spokesperson(s)). Below the revised TWG list with name(s) of their current spokesperson(s); recent changes are highlighted in red font:

- **Drivers of Space Weather (e.g. solar, S-T, including future missions and instrumentation)**
Subgroup 1: Solar Magnetic Energy, spokesperson: Henrik Lundstedt (IRF)
Subgroup 2: Solar Storms (Solar Flares, CMEs, SEP events), spokespersons: Nicole Vilmer (Paris Observatory) and Olga Malandraki (NOA)]
- **Ground Effects (GIC, prospecting, tourism), Spokesperson: Magnus Wik (NeuroSpace)**
- **Atmospheric Effects (incl. Drag), Spokesperson: Sean Bruinsma (CNES)**
- **Ionospheric Effects, Spokesperson: Matthew Angling (University of Birmingham and QinetiQ)**
- **Spacecraft, Launcher and Aircraft Environments, Spokesperson Susan McKenna-Lawlor (STIL), Co-spokespersons Federico di Marco (VEGA) and Guenther Reitz (DLR)**
- **Education, Outreach and Emerging Markets (EOEM), Spokesperson: N. Crosby (BIRA-IASB)**

In the past, the SWWT TWG websites were scattered on different servers and did not have the same layout. For this reason it was agreed at the SWWT Plenary meeting in Nov. 2011 to use the European Space Weather Portal (ESWeP) as a hub for the TWG websites thereby centralising them for easier access. NC created a template for this purpose and each TWG provided the required text for their TWG webpage. BIRA-IASB built the webpages (Stijn Calders); the pages are maintained and hosted by BIRA-IASB at: <http://spaceweather.eu/en/swwt> (can also be reached via <http://www.esa->

spaceweather.net/spweather/esa_initiatives/swwt/). It is the responsibility of the TWG spokesperson(s) to provide updates to their TWG webpages.

Prior to the SWWT Plenary Meeting in Nov. 2011 NC had received the final input/feedback from the previous SWWT TWG spokesperson(s) regarding their TWGs (e.g. activities performed during 2011). The first version of the report was revisited during the first part of 2012. Originally, it was planned to submit the report to the European Space Weather Space Climate Journal “ESWW8 special issue”. However, NC mentioned that the reviewing process would take long and suggested instead that the annual TWG yearly report should be made available via the SWWT webpage. Following discussions (also held during the SWWT Steering Board meeting the day after) it was agreed to follow this latter procedure.

Thereafter a presentation about each of the current TWGs was given highlighting the main events, etc. since the SWWT Plenary meeting in Nov. 2011.

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

The “Fundamental Research Group” TWG was renamed to “Drivers of Space Weather” during the ESWW8 meeting in Nov. 2011. Furthermore, two sub-groups were created (spokespersons have now been confirmed):

1. Solar Magnetic Energy [Henrik Lundstedt]
2. Solar Storms (Solar Flares, CMEs, SEP Events) [Nicole Vilmer and co-spokesperson to be confirmed]

On behalf of Anna Belehaki, Chair of the COST ES0803 Action, Norma Crosby presented the main results of the COST ES0803 Action “Developing Space Weather Products and Services in Europe” [<http://www.costes0803.noa.gr/>].

Ground Effects (GIC, prospecting, tourism):

Magnus Wik recently took over as spokesperson for this TWG. The “Ground Effects Topical Group” report was prepared by Magnus Wik and given by Larisa Trichtchenko.

Thereafter Larisa Trichtchenko gave the presentation “Recent developments in Space Weather services in Canada and South Africa.” that she had prepared.

Atmospheric Effects (incl. Drag):

The report “Atmospheric Effects Topical Group: Reporting period: 2011 – June 2012” was prepared by Sean Bruinsma and given by Norma Crosby.

Ionospheric Effects:

Matthew Angling recently took over as spokesperson for this TWG. The report “Ionospheric Effects Working Group” was prepared by Matthew Angling and given by Norma Crosby.

Spacecraft, Launcher and Aircraft Environments:

The report “Spacecraft, Launcher and Aircraft Environments” was prepared by Susan McKenna-Lawlor and given by herself.

Education, Outreach and Emerging Markets (EOEM):

The “EOEM June 2012 report” was prepared and given by Norma Crosby. She specifically highlighted the various space weather activities that had taken place during EGU2012 (Press Conference 9: “Space weather effects and forecasting”, Session ST5.1/NH1.10/PS5.5 (oral and poster) Space Weather and its Effects on Terrestrial and Geo-Space Environments: Science and Applications).

For more details about the individual TWG presentations see:

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

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

The final version of the fourth revised SWWT Terms of Reference was circulated by email to all members of the SWWT Steering Board following ESWW8. Having being approved by the SWWT Steering Board it has now been made available to the community on the SWWT website:

[http://www.esa-spaceweather.net/spweather/esa_initiatives/swwt/index.html] and on the ESWeP [<http://spaceweather.eu/en/swwt>].

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

Juha-Pekka Luntama presented the main achievements of the ESA Space Situational Awareness (SSA) Space Weather (SWE) Segment for the SSA Preparatory Programme (2009 – 2011). He also presented the objectives for the SSA-SWE Segment for the SSA Programme Period 2 (2013 – 2016). See presentation for more details.

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

Alexi Glover gave a presentation about the Expert Service Centers. This presentation was intended to recall the current status of the ESC network, as established during the SSA PP and give a preliminary overview of how the ESC concept may evolve as we move into

the next period of SSA-SWE activities. SWWT feedback is encouraged and the presentation is attached.

7. Action Item Review (Norma Crosby)

NC presented the list of SWWT Plenary Action Items (AIs) since SWWT Plenary meeting 26. All have been closed except:

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

This AI is still open and various ways are being identified, so that this AI can be closed:

[1.] With the permission of the asset owners, the EU COST ES0803 space weather resource catalogue [<http://www.spaceweathercatalogue.eu/>] is able to include assets from the SN-I list. In regard to confidentiality, the information is less detailed than what is found in the SN-I list since the intention is to provide contact and technical information about the assets only.

[2.] It was noted that in order to make the SN-1 available online, subject to similar data confidentiality issues as described in point [1.], a request would be required from the national delegations to the SSA programme.

AI M31/1: SWWT community to contact their national delegates to request on-line publication of the non-confidential aspects of the SN-I database.

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)

Gareth Lawrence presented a summary of the ESA SN-I project, that had just ended, covering the project's goals, results and the role of the user community.

9. FP7 SWIFF and EHEROES Projects (Giovanni Lapenta)

Giovanni Lapenta presented two EU FP7 projects that he is managing: [1.] eHeroes: characterising the environment in space, in order to provide useful information for planning and implementing space missions, [2.] SWIFF (Space Weather Integrated Forecasting Framework). See presentation for more details.

10. Virtual Space Weather Modelling Centre – Phase 1 (Stefaan Poedts)

Stefaan Poedts presented the ESA Virtual Space Weather Modelling Centre (VSWMC) project that recently had kicked-off. The objective is the construction of a long term (~10

years) plan for the future development of a European virtual space modeling centre consisting of a new open and distributed framework for the coupling of physics based models for space weather phenomena. See presentation for more details.

11. The Polar Cap PC Indices (Peter Stauning)

Peter Stauning gave an introduction to the Polar Cap indices status and how they are derived. He presented the goal of having the indices formally approved at the forthcoming IAGA 12th Scientific Assembly to be held in Yucatan, Mexico 26-31 August 2013. See presentation for more details.

12. Sunspot Workshop: Main Highlights (Frederic Clette and Laure Lefevre)

Frederic Clette presented the primary goals and background behind the “Sunspot Number Workshops”. Thereafter he presented the key issues and themes covered during the 2nd Sunspot Number Workshop, ROB, 21 – 25 May 2012, as well as the emerging outcomes of the workshop series. See presentation for more details.

13. Space Weather Activities in Ukraine: Summer 2012 Report (Aleksei Parnowski)

Aleksei Parnowski gave a presentation about the space weather related activities/ projects that Ukraine is currently involved in, especially space missions, meetings and FP7 participation. See presentation for more details.

PART 3: THE FUTURE

14. Upcoming Events

NC highlighted two upcoming European space weather events:

[1.] “Space Weather and Challenges for Modern Society”, 22-24 Oct. 2012, Oslo, Norway [<http://www.tiems.info/about-tiems/oslo-conference-2012.html>]; Peter Stauning presented the announcement (ppt) that had been sent to NC

[2.] “Ninth European Space Weather”, 5-9 Nov. 2012, Brussels, Belgium [<http://www.sidc.be/esww9/>]

NC reminded the audience that there is an event calendar on the ESWeP managed by Stijn Calders (BIRA-IASB):

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

15. ESWeP (Stijn Calders)

Stijn Calders presented the recent developments on the ESWeP [<http://spaceweather.eu/>] since the SWWT Plenary meeting in Nov. 2011. See presentation for more details.

16. SWWT Roadmaps Discussions (Norma Crosby)

NC reminded the participants that she had initiated a long-term (next two to three decades) European space weather Roadmap Activity within the SWWT. Some days prior to the ESWW8 meeting in Nov. 2011 NC had sent out the first release of the draft Version 1 of the SWWT roadmaps to the SWWT Steering Board and ESA. It represented inputs that were received from people that were directly contacted by herself, as well as her own inputs. She decided to take this approach, as she knew people were very busy with the “SSA SWE System Requirements Document and Product Specification Review” that were performed during the autumn.

At the ESWW8 SWWT Steering Board Meeting it was agreed that feedback/ input to the SWWT Roadmaps should be sent to NC by the end of Jan. 2012. There were a couple of Steering Board members that provided feedback.

In Feb. 2012, in collaboration with Susan McKenna-Lawlor, NC revisited and restructured the SWWT roadmaps. This included the feedback that she had received in Jan. 2012. The SWWT Roadmaps draft Version 2 will be finalised during the summer and sent out to the SWWT Steering Board and ESA.

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

NC presented the available information regarding the upcoming and final FP7 Space Call: Space FP7 Work Programme 2013. At the SWWT Steering Board meeting the day after it was learned that the “orientation Paper” located at http://ec.europa.eu/enterprise/policies/space/research/fp7-call-for-proposals/index_en.htm is not the most recent version and that the current version is less “space weather” oriented.

Alain Hilgers gave an overview about current and future ESA R&D activities and recalled the various programmes (General Study Programme, Technology Research Programme (TRP), General Support Technology Programme (GSTP), etc.).

18. Handing over the leadership to the next SWWT Chair

NC began by acknowledging everybody for the three years during which she had been acting as SWWT Chair. Thereafter she handed over the leadership to Stefaan Poedts.

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

Stefaan Poedts gave a presentation about himself (research interests and projects, teaching and publications) and his vision for the SWWT (its role, the TWGs, links with other organisations, using the new media (apps, twitter, Facebook, etc.), solar physics / space weather connection, contacts with the European Space weather industry / job markets, a need for a “European Space Weather Centre”). See presentation for more details.

20. Closing Words

Norma Crosby and Stefaan Poedts thanked the audience for their participation in the meeting.

The meeting ended at 18:30.

ANNEX

SWWT Plenary 31 Meeting

Wednesday 13 June 2012, 09:30 to 17:00, Brussels, Belgium

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