### Space Weather Working Team Plenary Meeting 28 Report 17 Nov 2010, Brussels, Belgium

Prepared by Norma Crosby, 29 Nov. 2010

The SWWT Plenary 28 Meeting was held on Wednesday 17 Nov. 2010, 14:30-16:30 in the Ambassadeur Room at the conference centre 'Oud Sint Jan' at the Seventh European Space Weather Week meeting in Brugge, Belgium. It was convened by Norma Crosby (NC) with Alexi Glover (AG) as ESA contact and was attended by more than 58 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 in 2010
- 3. SWWT Topical Groups Updates
- 4. SWWT Roadmaps (including SWWT wiki and status of SWWT resolutions)
- 5. Updated SWWT Terms of Reference
- 6. Data Policy and Relation to other Ongoing Actions
- 7. Action Item Review

#### PART 2 – PRESENTATIONS

- 8. BIRA-ROB White Paper on the SSA Programme for discussion (Noël Parmentier)
- 9. FP7 (current space Call) and FP8 (the future) (Mike Hapgood)
- 10. NATO SSA Activity (Mauro Messerotti)
- 11. ISWI Activities
- 12. USA/FEMA-EU/MSB (Lars Eliasson)
- 13. Space Weather Resilience in the U.K. (Mike Hapgood)

PART 3 – MISCELLANEOUS

- 14. SWWT Wiki Logo Competition
- 15. Final Words

#### [1.] Welcome

NC welcomed the participants to the 28<sup>th</sup> SWWT Plenary Meeting and presented the above agenda.

#### PART 1 – REVIEW OF GENERAL ITEMS

#### [2.] Review Main Events in 2010

NC presented the main SWWT related events occurring in 2010.

#### Meetings:

- "COST ES0803 User Workshop", 22-24 March 2010, Scientific Center of the Polish Academy of Sciences in Paris, Paris, France
- "SWWT/ESPD splinter meeting", 5 May 2010, 13:30-15:00 [European Geosciences Union General Assembly 2010, 2-7 May 2010, Vienna, Austria] [Co-convened by Norma Crosby (NC) and Stefaan Poedts (SP)]
- "Space Weather Working Team Steering Board meeting", 17 June 2010, 14:00-18:00, Belgian Institute for Space Aeronomy, Brussels, Belgium
- "Space Weather Working Team Plenary", 18 June 2010, 09:30-17:00, Royal Observatory of Belgium, Brussels, Belgium.
- "Space Weather Working Team Steering Board meeting", 15 Nov. 2010, 10:00-12:00, ESWW7, Brugge, Belgium

#### **<u>Project Proposals - Invitations to Tender:</u>**

N Crosby highlighted some recent opportunities where SWWT members have been active:

[1.] FP7 Space Call 3 project proposals [Deadline: Dec. 8, 2009]

- o SPA.2010.2.1-03 Exploitation of space science and exploration data
- o SPA.2010.2.3-01 Security of space assets from space weather events

Selected FP7 Projects have been under Negotiation in 2010 and those projects with space weather themes were announced on Monday at the 7<sup>th</sup> European Space Weather Week meeting in "Session 1: SSA Space Weather in Support of European Critical Infrastructure" during which short presentations were given.

[2.] ESA Invitation To Tender (ITT) project proposals:

- o SN-I: Space Weather Services
- o SN-II: Weather Instruments
- o CO-I: Requirements and Evaluation [Concerns the whole SSA System]

These three ESA studies form part of the new SSA Preparatory Programme. Selected Projects have been under Negotiation in 2010 and all Projects are now running.

[3.] FP7 Space Call 4 project proposals [Publication Date: 20 July 2010, Deadline: Nov. 25, 2010]

NC ended Item [2.] by mentioning two important European space weather news releases:

- ESWeP (European Space Weather Portal) Memorandum of Understanding has been signed.
- The European Journal of Space Weather and Space Climate was launched by Anna Belehaki on Monday during the opening session of the 7<sup>th</sup> European Space Weather Week meeting.

#### [3.] SWWT Topical Groups Updates

NC gave an update about the individual SWWT topical groups:



This year the SWWT Topical Groups were well-represented as splinter meetings during the 7<sup>th</sup> European Space Weather Week meeting, see: <u>http://sidc.oma.be/esww7/program/splinters.php</u>

Ground Effects Topical Group, GETG L. Trichtchenko Room: Beethoven, Tuesday Nov. 16, 14:00-16:00

Spacecraft, Aircraft and Launcher Environments S. McKenna Lawlor, G. Reitz, F. di Marco Room: Beethoven, Tuesday Nov. 16, 16:30-18:00

Atmospheric Effects S. Bruinsma Room: Bach, Wednesday Nov. 17, 12:30-14:15

Education, Outreach and Emerging Markets N. Crosby Room: Bach, Thursday Nov. 18, 14:00-16:00 Ionospheric Effects J.P. Luntama Room: Bach, Thursday Nov. 18, 16:30-18:00

It has been suggested that the SWWT Topical Group joint space weather report be published in the new European Space Weather Space Climate Journal. For this reason the SWWT topical group leaders will start writing their individual topical group reports following their ESWW7 splinter meetings (when all the updates are available). The goal of the yearly joint report is to make the work performed under the umbrella of the SWWT topical groups more visible to the whole community.

#### [4.] SWWT Roadmaps (including SWWT wiki and status of SWWT resolutions)

NC recalled that she had initiated a long-term European space weather Roadmap Activity (>10, 20 years) within SWWT and highlighted the main characteristics of the document roadmap activity:

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

Its overall objective is to take into account all expected key players and addressing the current and future critical elements and user community (/communities). NC also recalled that the main elements of the Draft Table of Contents has been placed on the SWWT wiki [http://swwt.aeronomie.be].

The first release and set of recommendations is expected in conjunction with the SWWT meeting in mid 2011.

#### SWWT Resolutions:

This was briefly mentioned at the end of the previous SWWT Steering Board meeting [17 June 2010] and refers to the SWWT resolutions mentioned in the Annex of the minutes taken by Mike Hapgood at the SWWT Steering Board meeting held on 3 Sept. 2009. It was noted in the minutes taken on 17 June 2010 that these resolutions will be built into the SWWT Roadmaps.

#### Indeed the Roadmaps should also lead to the Resolutions.

#### SWWT wiki:

The SWWT wiki has been created for the European SWWT community as a platform where people can express their thoughts in an informal way. It was launched on 29 March 2010. So far 19 people have subscribed:  $[3 \times Belgium, 1 \times Denmark, 5 \times England, 1 \times Italy, 3 \times The Netherlands, 5 \times Spain, 1 \times Russia]$ . However, people have not actively

been using it. It was discussed how this could be changed. Somebody must take the first step!

#### [5.] Updated SWWT Terms of Reference

The current SWWT Terms of Reference (ToR) is located at: http://www.esa-spaceweather.net/spweather/esa initiatives/swwt/index.html

NC gave the floor to Alexi Glover (AG) who presented the background and current landscape of the SWWT situation from ESA's point-of-view. AG recalled that this is the third update of the ToR, the milestone being the start of the ESA SSA Preparatory Programme.

The current ToR update aims to take into account the existence of the new programme structure within ESA and formalise the link to ensure that the SWWT continues to perform the key function of advising ESA on space weather issues.

The current ToR draft update was performed by NC and AG, and was circulated at ESA before being circulated among the SWWT Steering Board members prior to the June 2010 Steering Board meeting. Discussion is ongoing as to the scope of the SWWT mandate taking into account recent evolutions in the European landscape, and also how the Steering Board could be constituted to best facilitate the work of the SWWT. Currently, a list of suggested members of a restructured SWWT Steering Board has been established and the potential members will be contacted in the near future. This list covers both all ESA member states as well as full expertice in the various service domains under the SSA space weather programme.

#### [6.] Data Policy and Relation to other Ongoing Actions

NC recalled that during one of the previous SWWT Steering Board meeting a couple of Action Items regarding data issues had been issued. The aims are to formulate recommendations to the space weather community, emphasising the need for defining data standards for both national and international usage. It is important that data policy is a topic discussed under the SWWT umbrella, as it is a general issue for the community.

Eamonn Daly gave an introduction to this issue and this was followed by some general discussion. This is an important issue relevant for national initiatives as well as European and international (outside Europe) collaborations.

#### [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. [ONGOING]* 

Earlier in the year it was investigated with Henrik Lundstedt (HL) how best to coordinate this topical group with the ongoing Cost Action ES0803 in regard to science to

applications. HL continues to take an active involvement and will collect updates regarding solar related space weather research. Updates from SOTERIA and Cost Action ES0803 will be included (channeled into) in the annual "Fundamental Research" topical group report.

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: <u>http://www.esa-spaceweather.net/spweather/esa\_initiatives/swwt/index.html</u> [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 decision paper on SSA-Space Weather and whether there could be a link between this and the SWWT initiative. [ONGOING]

has been reformulated:

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. [ONGOING]

Ronald Van der Linden is a member of the group that has had the task of drafting this decision document. He said a few words about the "Long-term sustainability of the outer space activities" document that had been submitted in Feb. 2010: http://www.unoosa.org/pdf/limited/c1/AC105 C1 2010 CRP03E.pdf

in connection with the forty-seventh session of the Scientific and Technical Subcommittee of the Committee on the Peaceful Uses of Outer Space (UNCOPUOS) that was held from 8 to 19 February 2010 at the United Nation Office at Vienna, Vienna International Center, Vienna, Austria,

http://www.unoosa.org/oosa/COPUOS/stsc/2010/docs.html .

He mentioned that a formal group was created in June 2010 to advise on the above.

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 main outcomes of this discussion. [ONGOING]

has been reformulated:

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. [ONGOING] Inputs from the ESWW7 splinter meeting "Validation Procedures for Space Weather Models" will be included in this resumé.

#### PART 2 – PRESENTATIONS

### 8. BIRA-ROB White Paper on the SSA Programme for discussion (Noël Parmentier)

Some days prior to the SWWT Plenary meeting Noël Parmentier (NP) sent out an email to the SWWT mailing list regarding a white paper on the SSA preparatory programme that had been written by the Belgian Institute for Space Aeronomy and the Royal Observatory of Belgium. The paper is entitled "Space Weather in Europe: the way forward".

NP presented this white paper and there was some general discussion on the issues raised in the paper. It was agreed that the white paper should be made available for the community. NC ended the discussion by stating that the SWWT wiki is an ideal platform for further discussion regarding the white paper.

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

#### 9. FP7 (current space Call) and FP8 (the future) (Mike Hapgood)

Mike Hapgood (MH) gave an update on the FP7 current space Call. The second part of the presentation emphasised the importance of looking forward – lobbying now for extended coverage of space weather for example in FP8. Strong cases where space weather can be identified as a potential risk to civil security include Geomagnetically Induced Currents (GIC) and Global Navigation Satellite Systems (GNSS).

It was mentioned that on 8 Dec. 2010 the EU has organised a "Space research - FP8 hearing":

http://ec.europa.eu/enterprise/newsroom/cf/itemlongdetail.cfm?item\_id=4635

#### 10. NATO SSA Activity (Mauro Messerotti)

Mauro Messerotti gave a presentation on the new "Space Environment Support to NATO Space Situational Awareness" activity that has recently been endorsed by NATO RTO (Research & Technology Organisation) and which he is chairing.

#### 11. ISWI Activities

NC gave the floor to the Plenary to inquire if anybody had any news regarding the International Space Weather Initiative (ISWI).

Larisa Trichtchenko mentioned that the first ISWI workshop (convened by the United Nations, the National Aeronautics and Space Administration (NASA), and the Japan Aerospace Exploration Agency (JAXA)) had been held in Helwan, Egypt earlier in the month (6-10 Nov. 2010).

Terry Onsager highlighted the challenges in regard to the infrastructure in some countries in connection with the usage of observational techniques (e.g. magnetometers, GPS, scintillation detectors). He emphasised the goal of the ISWI to plant the seeds and encourage people to participate in such challenges.

Ersin Tulunay also mentioned the meeting in Egypt. He also highlighted the African region, especially around the equator where ground-based systems are needed in these areas to fill gaps in data coverage.

#### 12. USA/FEMA-EU/MSB (Lars Eliasson)

In February this year the United States (U.S.) Federal Emergency Management Agency (FEMA), the Swedish Civil Contingencies Agency (MSB), and the U.S. National Oceanic and Atmospheric Administration (NOAA) planned and hosted "The Workshop on Managing Critical Disasters in the Transatlantic Domain – The Case of a Geomagnetic Storm" in Boulder, Colorado. The workshop strengthened transatlantic emergency management ties and increased awareness among both U.S. and EU stakeholders of the dangers posed by severe space weather.

Lars Eliasson highlighted that this Action is being performed by Sweden and is therefore work being performed outside the SSA.

#### **13. Space Weather Resilience in the U.K. (Mike Hapgood)**

Mike Hapgood gave a short overview about recent developments in the UK space weather landscape, especially in regard to the interest of politicians.

#### PART 3 – MISCELLANEOUS

#### 14. SWWT Wiki Logo Competition

For the SWTW Logo competition NC had prepared a form to be given to the participants at the beginning of the ESWW7 meeting (see form on next page).

At the beginning of the meeting it was decided that the filling out of the form should be performed during the SWWT Plenary. By Thursday it was discovered that there were two favorite logos and that there were some possible trademark issues when comparing with the Microsoft Office XP Logo:



Therefore a new SWWT Logo competition will be held online in early 2011. For this reason there is still time to send in new suggestions for the logo.

| SWWT Logo Competition               |  |                           |   |  |  |
|-------------------------------------|--|---------------------------|---|--|--|
| You are invited to                  | You are invited to choose the logo of your choice by placing a circle around its below corresponding number. |                           |   |  |  |
| [To be delivere                     | d to the Registration Desk   | t before 18:00 on Tuesday | y 16 Nov. 2010]   |  |  |
| Saad Saad<br>Saad Saad<br>Saad Saad | Space Weether  | SHI                       | Logo to be inspired by<br>drawings from<br>the<br>"I Love My Sun"<br>event. |  |  |
| 1                                   | 2  | 3                         | 4   |  |  |

#### 15. Final Words

NC reminded the Plenary about the background behind the SWWT and what the objectives of the SWWT are. The SWWT is for the space weather community! For this reason community inputs to the SWWT roadmaps are very important!

It was mentioned that MH remains as contact person for new memberships to the SWWT [ contact email: mike.hapgood AT stfc.ac.uk ]. For more information about SWWT, including minutes and presentations from previous SWWT Plenary meetings see: <a href="http://www.esa-spaceweather.net/spweather/esa\_initiatives/swwt/index.html">http://www.esa-spaceweather.net/spweather/esa\_initiatives/swwt/index.html</a>

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"Ambassadeur", ESWW7 conference centre "Oud Sint Jan"

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