

# Space Weather Working Team Plenary Meeting 26 Report 19 November 2009, Brugge, Belgium

Prepared by Norma Crosby, 17 Dec. 2009

The SWWT 26 Plenary Meeting was held during the European Space Weather Week 6 (ESWW6) on 19 Nov. 2009 as a two-hour splinter meeting (14:00-16:00). The meeting was co-convened by Mike Hapgood (MH) and Norma Crosby (NC) with Alexi Glover (AG) as ESA contact. The meeting was divided into two parts:

## PART 1 – SWWT UP-TO-DATE

1. Welcome
2. Introduction to SWWT
3. SWWT Topical Groups Status
4. Main Events since Previous SWWT Meeting
5. Resumé of Steering Board Meeting 17 Nov. 2009 and Updates

## PART 2 – PRESENTATIONS

1. FP7 Space Call Review and Project Proposals [M. Hapgood]
2. NATO SSA Activity [C. Cid]
3. ESPD [S. Poedts]
4. European Space Weather Journal [A. Belehaki]
5. WMO [World Meteorological Organisation ] [A. Hilgers]
6. ILWS End User Task Group [A. Glover]
7. ISWI [International Space Weather Initiative] [A. Glover]
8. SEENoTC [N. Crosby]
9. European Sun Festival [N. Crosby]

## PART 1 – SWWT UP-TO-DATE

### **[1.] Welcome**

NC welcomed the participants to the 26<sup>th</sup> SWWT plenary meeting and presented the above agenda.

### **[2.] Introduction to SWWT**

For those not familiar with the SWWT an introduction to the background and objectives of the SWWT was given by NC. It was mentioned that MH will remain as contact person for new memberships to the SWWT and MH confirmed [ contact email: mike.hapgood@stfc.ac.uk ]. For more contact information see:

[http://www.esa-spaceweather.net/spweather/esa\\_initiatives/swwt/index.html](http://www.esa-spaceweather.net/spweather/esa_initiatives/swwt/index.html)

### [3.] SWWT Topical Groups Status

An overview of the SWWT structure was given by NC and thereafter an update of the individual topical groups:

- Ground Effects: Larisa Trichtchenko  
*Splinter meeting, Tuesday Nov 17, 14:00-16:00*
- Ionospheric Effects: Juha-Pekka Luntama  
*Splinter meeting, Tuesday Nov 17, 14:00-16:00*
- Spacecraft Launcher and Aircraft Environments [SLA]: Spokesperson T.B.D.  
A Hilgers reported on the task of finding a new spokesperson for the SLA topical group. Action to find spokesperson(s) is progressing and a SLA lunch meeting earlier in the week was referred to. New spokesperson will be announced after the ESWW6 meeting following discussion with the candidates.
- Fundamental Research: Henrik Lundstedt (HL)  
It is being investigated with Henrik how best to coordinate this topical group with the ongoing Cost Action ES0803 in regard to science to applications.
- Atmospheric Effects: Sean Bruinsma  
Active, but no updates to report on.
- Education, Outreach and Emerging Markets: Norma Crosby  
*Splinter meeting, Thursday Nov 19, 16:30-18:00*

During the previous SWWT Steering Board meeting NC suggested that individual topical groups provide input each year in early autumn for an annual European space weather report regarding their activities during the last year. This compiled report would be presented at the annual “European Space Weather Week” and published in the proceedings. The Steering Board felt this was a good idea and so further investigation is ongoing as to how to coordinate this (see note on Fundamental research TG above).

**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.

### [4.] Main Events since Previous SWWT Meeting

The previous “Space Weather Working Team 25” meeting was held on 4 Sept. 2009, at the Royal Observatory of Belgium, Brussels, Belgium. Since then the following main events have been:

- Infoday on the 3rd Space Call in FP7, Warsaw, Poland, Sept. 15-16, 2009  
Oral presentation “Space Weather Working Team and the 3rd FP7 Space Call” by Mike Hapgood, Norma B. Crosby, Iwona Stanislawska.
- Final ESA SSA Customer Requirements Review (CRR) meeting with national experts took place on 14 (afternoon) -15 (morning) Sept. 2009 and the “PB-SSA

meeting #3 took place on 15 Sept. 2009 (afternoon). SWWT was represented at the CRR meeting by N Crosby.

- “Space Weather Industry Day” in ESOC on 13 Nov. 2009
  - SN-I: Space Weather Services (IITT ref. 09.118.08)
  - SN-II: Weather Instruments (IITT ref. 09.118.09)

#### **[5.] Resumé of Steering Board Meeting 17 Nov. 2009 and Updates**

Important issues from the previous SWWT Steering Board (SB) Meeting, 3 Sept. 2009, were reviewed.

##### Assets to Federate:

The national delegations to the SSA Programme have supplied inputs on national space weather assets that are potentially available for the European SSA system.

AI SB 2009-1/1: SB members to contact national delegations to ask if they can check the list in respect of space weather assets. [DONE]

However, there is still a possibility to give last-minute input. Deadline: SWWT community to send final input by noon Saturday 28 November 2009 to:

1. Norma Crosby (will transfer input to the relevant national SWWT Steering Board member)
2. Jens Rodmann at ESA.

Lars Eliasson asked if the same request was valid for non-SSA subscribing states. Alain Hilgers commented that this list is independent of delegation provided information and other states are welcome to provide information on their assets.

Volker Bothmer commented on a lack of visibility of the asset collection process for SSA. Alain Hilgers referred to the poster at ESWW6 where this information is presented.

**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](http://www.esa-spaceweather.net/spweather/esa_initiatives/swwt/index.html)

##### ESA Advisory Structure:

It was noted that the SSA programme was establishing a User Representative Group (URG) as its advisory body.

AI SB 2009-1/2: SB members to contact national delegations to lobby for the SWWT Chair to be a member of URG. [DONE]

On Tuesday 15 Sept. 2009 at the “PB-SSA meeting #3” it was confirmed that the SWWT Chair will be a member of the SSA URG and, hence, will act as the focal point for SWWT community input to the SSA programme.

### Global Visions for Tomorrow:

NC recalled some of the global visions that she has for the SWWT.

1. The European space weather “user community” continues to grow and new users of space weather products are presenting themselves. The SWWT should continue to be open to new markets.
2. International collaboration between all world-wide and space weather efforts “complementing each other” is the way forward (e.g. Data policy [exchange of data], Modelling). This was highlighted by many of the Monday 16 Nov. 2009 afternoon speakers (e.g. ESA/SSA, EC).

### FP7/ESA/International Collaboration:

The EC FP7 SPACE 2010 call is currently open with an upcoming deadline 8<sup>th</sup> December 2009. Feedback during the ESWW has been very positive and a good number of complementary proposals are in preparation.

In response to several queries from the community during the FP7 SPACE-2010 proposal preparation period, the following official statement was issued by ESA:

*“ESA is supporting EC in the evaluation, negotiation and monitoring of FP7 supported actions for the “Strengthening Space Foundations” part (e.g. Space Exploration, Space Technology, Vulnerability of Space Assets, ... Agreement on this role excludes the possibility for ESA to act as a coordinator or participate in a proposal in answer to FP7 Space calls, for the “Strengthening Space Foundations” part. Nevertheless, it has been agreed that “ESA will advise Industry, SME’s, Research Institutes and Academia on complementarities of the EC calls for proposals, with ESA roadmaps”, thus playing a key role in maximising complementarities of ESA and EC activities.”*

Mats Ljungqvist from the European Commission has emphasised that international cooperation is encouraged in the current FP7 Space Call.

M Hapgood proposed that an action for the next SWWT plenary could be to look at the Framework Programme 8 to ensure that Space Weather appears appropriately in the work programme.

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

### SWWT Updated Terms of Reference:

The SWWT Terms of Reference (ToR) is located at:

[http://www.esa-spaceweather.net/spweather/esa\\_initiatives/swwt/index.html](http://www.esa-spaceweather.net/spweather/esa_initiatives/swwt/index.html)

Go to: Terms of reference

AI SB 2009-1/3: NC, MH and AG to propose updated terms of reference at next SWWT meeting. [ONGOING]

NC recalled some of the main topical SWWT roles that will be covered by the updated ToR:

- SWWT provides focus for space weather inputs into the SSA advisory structure.
- Space weather roadmap update [bring together inputs from different groups].
- ESA ministerial council meeting 2011 [how best to support ESA, lobbying, ...]
- FP7 Space Calls in general [how best to coordinate community inputs]

The background behind this update is to take into account recent developments in European space weather activities such as the start of the ESA Space Situational Awareness preparatory programme. The updated version is being written up and will be available in January 2010.

#### SWWT Roadmap Activities:

NC has initiated a Roadmap Activity within SWWT.

AI SB 2009-2/5: NC to prepare a draft version of the SWWT Roadmap for the next SWWT meeting. *[date to be determined]*.

AI SB 2009-2/6: SWWT Blog (or something similar) to be developed for the SWWT community (NC to organise).

The concept is that the community will have a platform where they can express their ideas in an informal way. NC emphasised that input from the community is very important for the output of the roadmap activity.

## **PART 2 – PRESENTATIONS**

The second part of the meeting consisted of individual presentations from the SWWT community.

### **[1.] FP7 Space Call Review and Project Proposals [M. Hapgood (MH)]**

MH has been acting as the SWWT focal point for FP7-space proposals. He reported on the main topics that he is aware of that are being covered in the FP7 Space Call project proposals (Several on ionospheric applications, Atmospheric drag, Radiation belts and SEPs, Solar). He encouraged coordination between proposing teams. In general the Sun-Earth scenario is well-covered and there seems not to be “large” overlaps between the proposals.

### **[2.] NATO SSA Activity [C. Cid (CC)]**

CC presented the technical team of the Research & Technology Organisation (RTO) / SCI-229-ET “NATO Operation and Space Situational Awareness”: [*Chair*: Dr. Frank Jansen, Germany; *Vice-Chair*: Prof. Consuleo Cid, Spain; *Secretary*: Prof. Mauro

Messerotti, Italy; *Mentor*: LTC Erwin Duhamel, Belgium; *Executive*: LTC James Zink, France; *Supporting Nations*: Germany, Italy, Slovakia, Spain, Norway, USA]. It was emphasised that new nations are welcome to join this initiative.

An upcoming progress meeting will be held 14-16 Dec. 2009 at DLR in Bremen, Germany. M Hapgood asked whether security clearance was required and this was confirmed.

### **[3.] ESPD [S. Poedts (SP)]**

SP, president of the ESPD, spoke about the future plans of ESPD, a division of the European Physical Society that represents and provides a forum for scientists interested in the physics of the Sun. For more information, see:

<http://achilles.nascom.nasa.gov/~dmueller/espd/index.php>

### **[4.] European Space Weather Journal [A. Belehaki (AB)]**

AB presented the ongoing efforts of establishing a European (open access) space weather journal. Interdisciplinary is the key word for this journal. The journal will accept not only original research papers but also reviews, engineering and data reports, concise project reports, as well as research and project proposals. “EDP Sciences publications” has been selected and negotiations with them to establish the journal will begin shortly.

### **[5.] WMO [World Meteorological Organisation ] [A. Hilgers (AH)]**

AH gave an update about WMO space weather related activities. WMO supports international coordination of space weather activities acknowledging the potential synergy between meteorological and space weather services:

<http://www.wmo.int/pages/prog/sat/SpaceWeather.html>

### **[6.] ILWS End User Task Group [A. Glover (AG)]**

AG gave an update about the International Living with the Start (ILWS) End Users Task Group. A summary of the “End User Requirements Survey” was presented. Results of the survey are currently being related to measurement requirements. Next steps include identifying modelling requirements and agreeing on a procedure to capture priority knowledge requirements in each domain, as well as comparing with ILWS related missions available data and associated modelling activities. A report will be published in the near future. For more information, see:

[http://esa-spaceweather.net/spweather/international/ilws/index\\_ilws-user.htm](http://esa-spaceweather.net/spweather/international/ilws/index_ilws-user.htm)

### **[7.] ISWI [International Space Weather Initiative] [A. Glover (AG)]**

AG gave an introduction to the ISWI. This initiative builds upon the achievements of the International Heliophysical Year (IHY) and continues collaboration with the United Nations Basic Space Science Initiative (UNBSSI). The objective of ISWI is to develop the scientific insight necessary to understand the science, and to forecast near-Earth space weather using the following tools: 1. Instrumentation and data analysis, 2. Coordinate data products to provide input for physical modeling, 3. Coordinate data products to allow predictive relationships to be developed. For more information, see:

<http://www.iswi-secretariat.org/>

**AI M26/4:** AG 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 SW initiative.

**[8.] SEENoTC [European Space Environment and Effects Network of Technical Competences ] [N. Crosby (NC)]**

On behalf of Eamonn Daly (ESA) and Giovanni Santin (ESA) NC presented SEENoTC, a network that covers energetic particle radiation and its effects on systems, payloads and humans, as well as natural and induced plasma environments and their interactions with spacecraft, and resulting effects on systems and payloads. Objectives of SEENoTC includes: 1. reinforcing the coordination of both existing and planned activities related to space environments and effects in Europe, 2. strengthening Europe's position in this field through the implementation of a coherent strategy developed by the participants of this Network with a view to improving efficiency and reducing risk. SEENoTC is responsible for producing and maintaining roadmaps for coordination in a number of areas. For more information, see:

<http://space-env.esa.int/index.php/SEENoTC.html>

**[9.] European Sun Festival [N. Crosby (NC)]**

The concept of the European Sun Festival was presented by NC. This festival aims at creating an annual event, which will include all aspects of human activities linked to the Sun including science, applications, arts and humanities. More information about the event to follow in the near future

Meeting closed at 16:00.

**SWWT Plenary Meeting 26 Action Items**

**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.

**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](http://www.esa-spaceweather.net/spweather/esa_initiatives/swwt/index.html)

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

**AI M26/4:** AG 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 SW initiative.