Space Weather Working Team #20

Royal Library, Brussels

17th Nov 2006, 14:00 to 16:30

AGENDA

1. Welcome
2. Agree agenda
3. Brief review of SWWT actions
4. Discuss matters arising during ESWW3, e.g.

* News and key issues from the SWWT topical groups
* SW discussions with EU

5. Discuss proposed SWWT resolutions
6. Date and place of next meeting
7. AOB

(details on later slides)

SWWT Review actions

M17/13 Examine the possibility of associating European outreach SW activities with SEC outreach activities

Open. AG noted that this concerned links with the IHY outreach work at SEC Boulder. She was not sure who is the contact after the retirement of Barbara Poppe. We need to check who this is.

M18/3 Define as soon as possible a date for a SDA community meeting (D. Heynderickx and M. Menvielle).

Open .

M18/11 Take advantage of IHY to start new long term monitoring such as the monitoring of solar radio flux, signature of CMEs, shocks, SEP, ... from a network of multi-frequency radio telescopes (SW radioscientists, January 2006 European IHY meeting)

Open. FL stressed that this needs input from scientific community. MP noted that the current approach to coordination is a patchwork - the community is disorganised. MH commented that it was done much better 50 years ago by the organisers of IGY; FL agreed. This action will be taken forward into ESWW3.

SWWT Review actions

M19/1 AG and MH to revise terms of reference and circulate to members.

Closed - update distributed

M19/2 MH to include launchers in the TG for spacecraft and aircraft environments and seek suitable members.

Open.

M19/5 TBD to explore how to set European user group for dissemination of ST data from SWARM.

Open

M19/6 MH to report on 30 June meeting at EU.

Open

SWWT Terms of Reference

{8th June 2006}

- The SWWT is a forum open to European experts in space weather applications and related science.
- The SWWT investigates space weather applications' requirements, space weather services and the underpinning research and development. It also advises ESA on strategies and activities related to space weather.
- The SWWT will promote activities aiming towards the development of European operational space weather capabilities. This will include coordination of developments at European, national and industry levels. Activities can include development of applications and/or research into the underpinning science.
- The SWWT seeks to identify and discuss potential collaborations and/or synergies with other structures or organizations.
- The SWWT will be responsible for establishing and monitoring the execution of a roadmap for space weather operational services and associated research.
- The SWWT will facilitate the exchange of information on European, national and industrial activities, will draw conclusions, will integrate activities into the above roadmap where appropriate and will make recommendations to European and national agencies and industry concerning execution and coordination of activities..
- The SWWT will take the necessary steps to organize its work including updating and maintaining Annex A (Mode of Operation).

SWWT Terms of Reference

- **Annex A: Mode of Operation.**
- SWWT membership is open to representatives of any institute or ~~private~~ company currently undertaking space weather related activities. The SWWT meets at approximately 6 monthly intervals. In addition, several "Topical Groups" maintain regular contact via email. The Chairperson will be chosen by the membership through an election. The mandate shall be for a period of 2 years with an option to extend by 1 year.
- The SWWT shall establish a Steering Board (SB) to act as an executive group. The SB shall consist of:
  - the SWWT Chairman,
  - representatives nominated by national and European funding agencies that support significant space weather activities
  - experts in areas of technical and strategic importance. These shall be selected by the Chairman in consultation with ESA.

  This SB will synthesize the roadmap and recommendations from the SWWT for presentation to agencies and other concerned parties, as appropriate.
- The SWWT will seek to identify and discuss potential collaborations and/or synergies with other structures or organisations including, but not limited to, the ESA SEENoC, ESA NoE on Propagation, EC FP & COST programmes, ISES, COSPAR, SCOSTEP and ILWS.

SWWT Terms of Reference

- **Annex A: Mode of Operation.**
- The SWWT will assist ESA in evaluating the lessons learned from ~~the o~~peration of the space weather applications pilot project and how these can be implemented within a strategy for any future space weather programme.
- All members are invited to participate in topical working groups (TWG). TWG are responsible for initiating projects, discussing new advances and/or progress in existing research and service development. TWG will also be responsible for promoting pilot project activities within Europe and among the communities outside.
- The current list of topical groups is as follows:
  - Fundamental Research (e.g. solar, S-T, including future missions and instrumentation)
  - Ground Effects (GIC, prospecting, tourism)
  - Atmospheric Effects (incl. Drag)
  - Ionospheric Effects
  - Spacecraft, Launcher & Aircraft Environments
  - Education, Outreach and Emerging Markets

Launcher

SWWT Terms of Reference

- **Annex B: Topical Groups**
- In addition to attending regular 6 monthly meetings, all SWWT members will be invited to participate in topical working groups (TWG).
- SWWT members will be free to join as many TWG as they wish, depending on their research interests.
- Each TWG will elect a spokesperson responsible for maintaining regular email contact amongst the TWG members and reporting to the SWWT at each 6 monthly meeting.
- Regular email contact between the TWG members will be maintained by the group spokesperson.
- TWG will be responsible for initiating projects, discussing new advances and/or progress in existing research and services and promoting related space weather pilot project activities within Europe and to communities outside.

SWWT News & issues from topical groups

Ionosphere

Education, Outreach and Emerging Markets

SWWT SW discussions with the EU

- Brussels, 30 June
  - MH, FL, PG, AG, RvdL, MM
  - Met with space policy unit
  - FP7 space theme dominated by GMES
  - How does SpW help EU space objectives
- Brussels, 16 Nov

SWWT RESOLUTIONS

1. To maintain awareness of space weather conditions, and to progress the science underpinning our understanding of space weather, it is essential to carry out long-term monitoring of the space environment, using an appropriate mix of space-based and ground-based sensors. This dependence on long-term monitoring is characteristic of the environmental sciences. The Space Weather Working Team therefore recommends that European funding agencies should consider space weather and its underpinning science as part of the environmental sciences.

2. National space weather programmes are now developing in several countries - especially in Germany, Belgium, Italy and France. The Space Weather Working Team welcomes these developments and recommends that ESA, through its R&D or other actions, supports European coordination of these national activities, e.g. by ensuring maintenance of coordination tools such as SWENET.

SWWT RESOLUTIONS

3. A key factor controlling most space weather phenomena is the state of the solar wind, including its embedded magnetic field, that impacts the Earth's magnetosphere. Upstream monitoring of the solar wind and magnetic field (e.g. at the L1 Lagrangian point) is critical for many space weather services and also for studies of the underpinning science. The Space Weather Working Team therefore recommends that the relevant agencies (NOAA, ESA, etc....) consider a follow-up to the current provision based on the aging NASA Advanced Composition Explorer spacecraft and the associated data infrastructure established by NOAA.

4. Space weather is potentially of wide interest outside the expert community. For example, it is important to raise and maintain awareness of space weather effects among the engineers and managers responsible for the many systems affected by space weather. Experience suggests that effective awareness requires repeated training at intervals of no more than two years. Space Weather Working Team therefore recommends that more effort be put in education and outreach based on space weather activities.

End

AOB

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