

SWWT

Space Weather Working Team #19

ESA HQ, Paris

29th June 2006, 09:30 to 16:00.

SWWT

AGENDA

1. Introduction & statement from incoming SWWT Chair (MH)
2. Review actions from last SWWT meeting
3. Discuss updated SWWT Terms of Reference
4. Space weather activities in ESA
5. Highlights from national SW activities
6. Development of a space weather roadmap (MH)
7. SW discussions with the EU : short report (MH, PG)
8. Other European SW activities: news and key issues
9. Space Weather and Eumetsat
10. Plans for ESSW3 (AG)
11. News and key issues from the SWWT topical groups
12. Summarise actions
13. AOB

(details on later slides)

- Have community centred around the Space Weather Working Team and the ESA Pilot Project
 - But need to expand awareness in community,
 - Maintain good links with other Euro projects (COSTs, DIAS, ...)
- How to convert this excellent start into an enduring project?
 - Political effort to improve & maintain awareness of space weather issues among decision-makers at European and national levels.
 - Promote in EU and FP7
 - Outreach to all interested – scientists, engineers, managers, public
 - SWWT provides a base of activists for lobbying.
 - Rise to Solar Max 24 provides timely target
- Develop common vision => clear message to decision-makers.
 - Not easy because space weather is diverse discipline.
 - Listen to the aspirations and concerns of others
 - Form that vision as a “roadmap”
- Rebuild synergies that used to exist between space science and space weather applications.
 - SW needs use-inspired basic research

Broader issues

- promote the importance to humanity of our space and planetary environment and that this environment requires scientific study in a similar way to the terrestrial environments studied by the geosciences.
- To recognise that much of space weather is an application of plasma physics and to link its advance with better understanding of plasma physics in general and solar system plasma physics in particular.
- To raise awareness that the space environment is subject to extreme events just as are the weather and the oceans, that space-weather sensitive infrastructure is at risk in such events and thus that emergency planners need to understand that risk.

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Review actions

- M17/2** Investigate the possibility of submitting a proposal for a EUMETSAT SAF
- M17/3** Contact the Panel of experts on space and security
- M17/6** Submit the briefing pack to a journalist.
- M17/8** Organise a meeting with the EC Space Policy and Space Application Units
- M17/9** Define the content of a SW-ERANET project
- M17/13** Examine the possibility of associating European outreach SW activities with SEC outreach activities
- M18/1** Identify contacts with persons involved in the definition of the European Space Programme (P. Gille, F. Lefeuvre, next SWWT meeting).
- M18/2** Organise a meeting with the EC Space Policy and Space Application Units about SW weather activities which could be proposed to FP7 (P. Gille, next SWWT meeting).
- M18/3** Define as soon as possible a date for a SDA community meeting (D. Heynderickx and M. Menvielle).
- M18/4** Send to the SWWT members examples showing how to operate SWENET (D. Heynderickx, As soon as possible).

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Review actions

- M18/5** Send comments and recommendations to A. Glover and A. Hilgers about the use of the SWENET services, the SDAs which will emerge, etc. (All SWWT members, As soon as possible)
- M18/6** Propose contact with Meteo National Delegates to prepare presentations at the EUMETSAT Science Working Group (All SWWT members, by end of January 2005)
- M18/7** Finalize the Era-Net document (F. Lefeuvre, by the end of January 2006)
- M18/8** Volunteer to review the Era-Net documentation in preparation (All SWWT members, As soon as possible)
- M18/9** Approach national Agencies for the endorsement of the Era-Net document (All SWWT members, after Action M18/6).
- M18/10** Organize a meeting on the future of SWWT activities (E. Daly, A. Hilgers, F. Lefeuvre and H. Opgenoorth, by end of 2005)
- 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)
- M18/14** A. Glover and H. Lundstedt to discuss with M. Messerotti the inclusion of his working group activity on solar monitoring and geomagnetic indices topic in the Fundamental Research Topical Group activity.

{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).

- **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 Chairman will nominate a steering board (SB), consisting of representatives of the main funding agencies and key technical and strategic expertise. 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.
- The SWWT will assist ESA in evaluating the lessons learned from the operation 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 & Aircraft Environments](#)
- [Education, Outreach and Emerging Markets](#)

• **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.

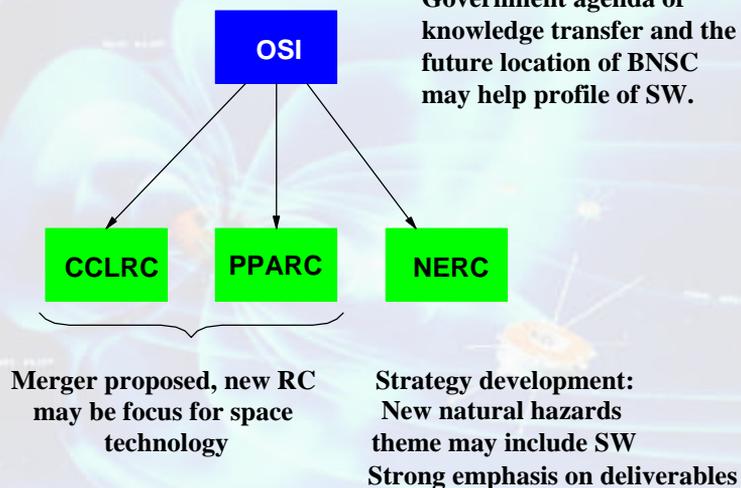
- Space Environments and Effects Network of Competences
- Other ESA activities related to SW

SWWT Highlights from national SW activities

- SW Activities at University of Alcalá, Spain (Consuelo Cid)
- Recent developments in space-weather research and services in Germany (Stanimir Stankov)
- French SW activities (Jean-Yves Prado)
- Italian SW activities + eGY (Mauro Messerotti)
- Belgian SW activities (Stefaan Poedts)
- UK SW activities (Mike Hapgood)
- Other?

SWWT UK SW activities

- High-level stuff



- UK ionosondes (Chilton, Stanley)
 - PPARC funding ending – threat of closure
 - Search for alternatives in progress
 - Defence, climate change, new HF apps, ...
- KuaFu – much interest.
 - Instrument develop bids due in July
 - UK-China workshop end Aug
 - What is core SW interest? KuaFu-A?
- ISS
 - Sussex group involved in SW plasma monitor on Obstanovk (environment) Experiment Complex
- Stereo
 - HI team at RAL looking forward to launch

- FMI taking lead (Juha-Pekka Luntama) - discussion is proceeding surprisingly well.
- Formal EUMETSAT management position is that space weather is outside the current EUMETSAT mandate.
- But question has triggered further discussion in the framework of the Post-EPS mission planning and user requirement definition.
- Mostly via EUMETSAT Scientific and Technical Group (STG) and in the Science Working Group (SWG).
- Chair of STG (Wolfgang Benesch) has asked FMI to take a lead in preparing a short report for the STG about the space weather applications, user community, and the potential use of the data already provided by EUMETSAT.
- To be provided to the STG as information in the next meeting in September.

Education, Outreach and Emerging Markets (Norma Crosby)

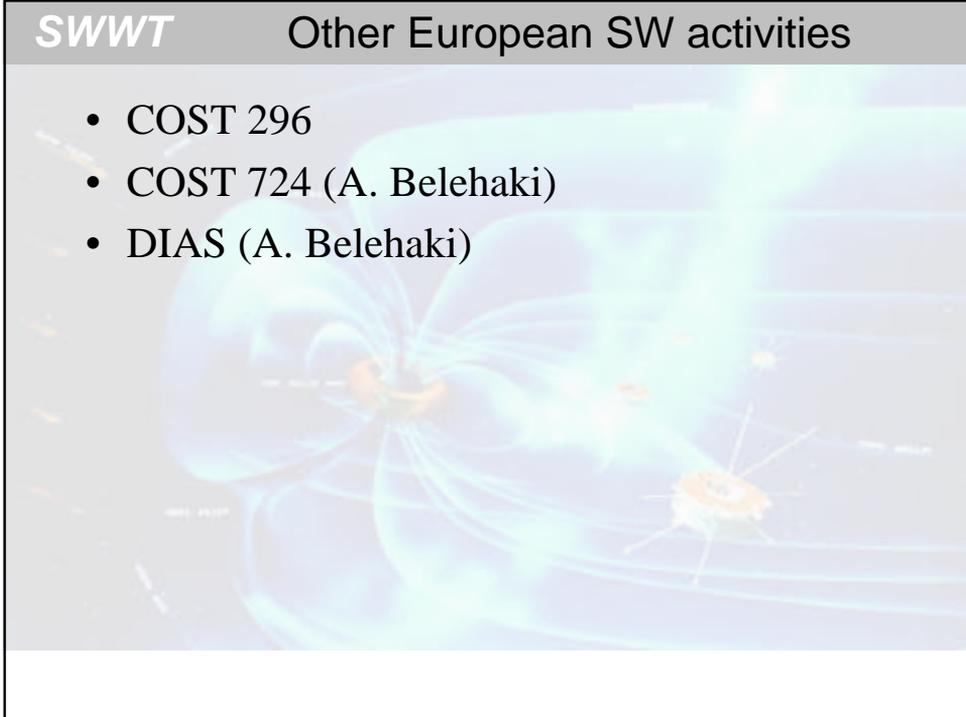
- EGU session "Education and Outreach in the Earth- and Space Sciences" had 21 abstracts and was well attended.
- But no European space weather contributions (but 2 from US!) despite SWEN announcement
- Is there is interest from Europeans for this type of activity?
- *From UK viewpoint – yes. Others?*

- Visit tomorrow (30 June)
 - MH, FL, PG, AG, RvdL, MM
- Key issues
 - Follow-up from March 2005 (measurement networks, SpaceSec report, EUMETSAT, Lofar/GPO, Euro Space programme)
 - **FP7!!**
 - Review PP, COST, DIAS as examples
 - SpW roadmapping
 - EU interest in ESWW3

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Other European SW activities

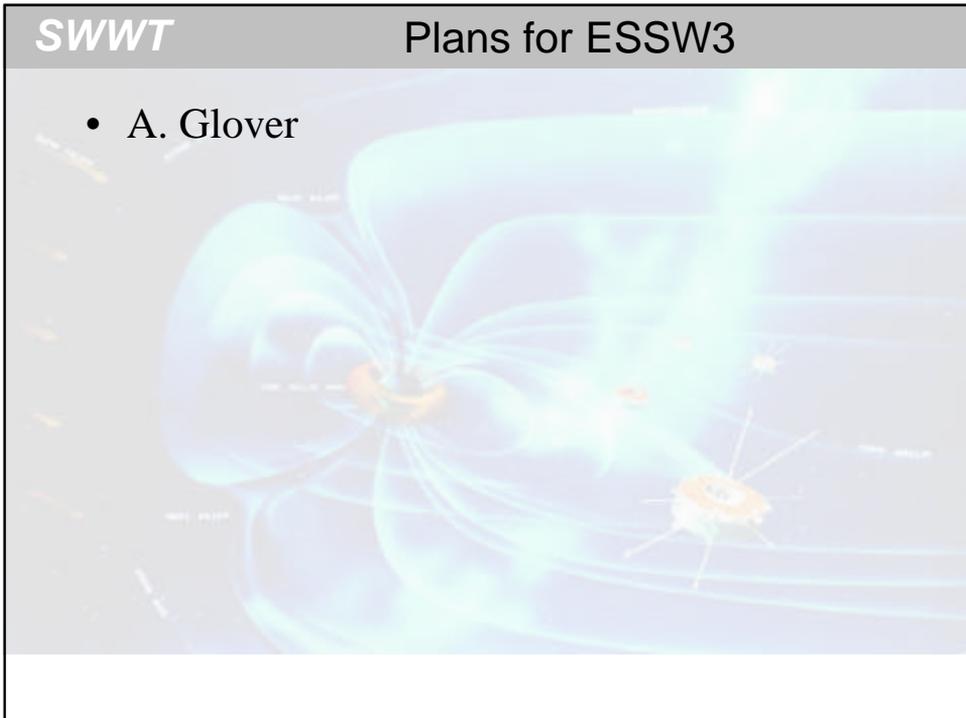
- COST 296
- COST 724 (A. Belehaki)
- DIAS (A. Belehaki)



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Plans for ESSW3

- A. Glover



- 12. Summarise new actions
- 13. AOB
 - SWEN Newsletter blocking @ RAL, elsewhere?

- Do we need a roadmap?
 - vision of options for the future
 - How we might get there
- What exists?
 - Docs from previous studies
 - Ideas, e.g. SW institute (MM), ERANET
 - Interest in ESA-led SW executive group
- Brainstorming group/meeting needed?