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SWWT-11, Berlin, 5/11/2002

Eligibility of Space Weather proposals in FP6

Prepared by P. Gille & F. Lefeuvre

1. Context

   FP5, FP6, Galileo, GMES, EU, ESA, Ministerial conferences (2001)
   SW ESA study : previous contacts with F. Ongaro, L. Tytgat
   ESA Pilot projects, GMES-GSE

2. **Brussels meeting**

   Purpose of the meeting, participants
   EOI submissions related to space weather
   Proposed questions and answers

3. New events

   New documents : EOI analysis**, "confidential" WP**, Green paper
   FP6 kick-off : 11/11/2002
   FP6 first calls : 12/2002 ?

Meeting about eligibility of space weather proposals in FP6
Brussels, 8/10/2002

Purpose of the meeting :

To identify a role for space weather within the FP6 priorities
and thereby gauge how best to proceed in submission of space weather related proposal(s)
in response to future calls.

Participants :

EC RTD : Space Research Policy & coordination Unit , ***EC RTD*** H4
Luc Tytgat, Nisso Gargir, Paolo Salieri : **space activity**
Michel Schouppe : **Global change** aspects
Guy Weets : **IST** aspects

SW **team**:
Roberto Battiston, Bob Bentley, Paul Gille, Roger Gendrin, Alexi Glover, Alain Hilgers, Richard Horne, François Lefeuvre, Hermann Luehr, Stavros Katsanevas, Anssi Maelkki, Risto Pirjola.

Unable to attend :
H. Butcher, M.Hapgood, B..Huet, N. Jakowski, H. Lundstedt, P. Stauning, B..Thide, W. Verschueren.

FP6 - EOI submissions related to space weather (June 2002)

Acronym	Leader(s)	Main Institute	Ctry	Title	Type	Themat
WATCSA	H. Lundstedt, H. Butcher	IRFU, Lund	Sw	Wide-Area Time-Coherent Sensor Arrays	IP	1.1.2 IST
EASE	**F. Lefeuvre, P. Gille, R. Pirjola,** B. Huet, M. Hapgood	LPCE, Orléans	Fr	Effects on Aircraft and Satellite of space Environment	NoE	1.1.4 A&S
ISWP	**B. Bentley**, A. Coates	MSSL, London	UK	An Integrated Approach to creating a European Space Weather Programme	NoE	1.1.4 A&S
SACE	H. Lundstedt	IRFU, Lund	Sw	Solar Activity and Climate in Europe	IP	1.1.4.ii space
SATPRO	**R. Horne**	BAS, Cambridge	UK	Protection of Telecommunication and in Orbit Navigation Satellites	IP	1.1.4.ii space
SWAN	**A. Glover, A.Hilgers**	ESTEC- TOS-EMA	Eur	Space Weather Applications Network	IP	1.1.4 A&S
SPACERAD	**R. Battiston, S. Katsanevas**	INFN, Padova	It	A collaborative initiative for state of the art applications of Radiation Detection in Space	IP	2.3 RadPro

CRISIS	**H. Luehr**, B. Merz	GFZ, Potsdam	De	Natural Disasters in Europe: Comprehensive Risk Assessment and Information Strategies	NoE	1.1.6.3 GloCha
SWEEC (spwcl)	P. Stauning	DMI	Dk	Space Weather Effects on Earth's Climate	IP	1.1.6.3 GloCha
MOPLE	S. Stankov, N. Jakowski	DLR, Neustrelitz	De	Monitoring of the GeoPlasma environment	?	?
SPECIAL	J.Wolfgang, M. Füllekrug	ESF Goethe Universität, Frankfurt/M	De	Space Processes and Electrical Changes Influencing Atmospheric Layers	NoE	1.1.6.3 GloCha
+ COST Action 724	T. Clark, J. Lilensten	BGS, Edingburgh	UK	"Developing the scientific basis for monitoring, modelling and predicting space weather"		

A full description of EOI's may be found in : http://eoi.cordis.lu/search_form.cfm

Proposed questions and answers

a. Several **Expressions of Interest** related to **space weather** have been submitted.

As Space Weather was not included as such in the Commission proposal, several interpretations have been made.
Most projects have been circulated in the community which has been formed around the ESA initiatives about a future European Space Weather programme.
Groups are ready to start discussions to merge and/or to reorient proposals. But we need time.

The point is to know if the submitted expressions of interest have a chance to open or extend the objectives and activities to subjects related to Space Weather.

General remark

It was made clear from the beginning that it was well understood that
the role of EU/Space and aeronautics section is focussed on
the utilisation of well identified space assets like GALILEO and the GMES assets,
excluding space infrastructure development itself.

b. Priority 1.1.4 : **Aeronautics and space**

Objectives such as "increase aircraft safety", "**Galileo** exploitation", "use of **GMES** for specific demands such as planetary environments", ... are presented in a very restricted manner.
Presently, the variations of the environment, and the effects of these variations, are not considered..
Is there a chance that they could be included in some way or another ?

EU representatives are impressed by the already critical mass in Space Weather.

As demonstrated by the audience, it is clear that the constitution of a federation is in progress.

This is the basis of a Network of Excellence.

However, presently, it seems that the only way to contribute to the 1.4 priority (Aeronautics and space) of FP6 is to be hosted by programmes like GALILEO.

e. Priority 1.1.2 (**IST**= Information society technologies)

is it any possibility to introduce the collection and dissemination of Space weather data ?

The IST programme is directed to research on information and technology, not on users.
There will be no major call next years.

c. Priority 1.1.6 (**Sustainable development**), sub-thematic (iii) , (**Global change** and ecosystems),

is there a chance that activities on space weather be considered as a major input for the understanding of the effects of man made activities on the ecosystem ?

f. A possible role for Space Weather in **GMES ?**

- health, climate,
- risk management for technological systems of wide public interest, e.g. power plants, telecom, navigation, …
- risk management in the sense of providing 'protection' to all GMES assets.

The space environment as such is not part of the environmental aspects addressed by this division.
However, space weather topics related to climate variability and climate dynamic may be eligible.
They must compete with proposals coming from well established communities.
It was mentioned that the term "solar weather" sound more appealing than "space weather".

d. Sub-thematic priority 2.3 "**Radiation protection**"

is there a possibility that problems related to the presence of man in space be included ?

: see SPACERAD proposal

g. A possible structure for SW in FP6 : one **network of excellence** with several **integrated projects** ?

Concluding remarks

To reach higher priority level, activities on Space Weather must be supported by member states, users, etc. to be on the EU agenda.

It is recommended to take advantage of the new space policy which will appear in November (green paper) to collect these supports and to send them to EU.

This may allow to submit eventually a proposal of a full Space Weather network of excellence in the future.

For the time being, there may be nevertheless opportunities for projects covering risk management issues and related to space weather.

Additional comments (PG)

- very good welcome by EC representatives, to be maintained
- to inform EC on SWWT activities, to invite to next meetings
- to put pressure on National Delegates (see Alexi's list)
- to involve science and business (SMEs)
- to play the rules of the Bruxelian game, (EU FP6 is not an ESA AO !)
- to rebuild the consortia, towards a limited number of proposals

New "confidential" document (selected parts)

AEROSPACE 2002-06
21.10.2002

DRAFT

Thematic Priority
1.4 Aeronautics and Space

WORKPROGRAMME
2002-2006

Table of contents: SPACE

Technical Content : GMES

There are four generic research topics that are relevant to the two domains: Environment and Security.

Generic research topics

Modelling: the activities covered under Space part of the workprogramme are complementary to the activities covered under the Global Change and Ecosystems. The target is to improve the performance of the processing chain associated to a domain, without affecting the response time of the overall system.

Data enhancement: the operational target is to reduce significantly the current lead times from the identification of the data source to data incorporation in the model.

Validation of models: Focus should be on:

Services: the different domains are experiencing delays in data procurement, processing, transmission and user training. Research in this area will investigate suitable system-level architecture to comply with quality-of-service requirements.

Specific research areas

Environment:

A: Land Cover and Vegetation
B: Water Resources
C: Ocean and Marine Applications
D: Atmosphere

Security:

E: Risk management
F: Security

Integrated focused research actions for the 2002 Call for Proposals

Integrated projects

IP.1a Ocean and Marine Applications
IP.1b Risk management
IP.1c Land Cover and Vegetation

Networks of Excellence

NE.1a: Security (Global Information Network for Security)
NE.1b: Water resources

IP.1b Risk management / Integrated projects /

Objectives

The information required for this application differs in time (before, during or after a crisis) and needs to be integrated optimally and operationally into the decision making chain of the risk-management and civil protection services. The main objective is to reach a pre-operational capability having the required multi-sector expertise and able to provide users with real-time, validated and consolidated information.

Technical content

Research activities will focus on developing methods for data processing and integration. The rationalisation of the organisation is required for the production of efficient information, particularly considering the intrinsic characteristics and lifecycle of risks.

The specific areas are: Floods; Forest fires; Earthquakes and volcanic eruptions; Landslides; Unintentional man-made hazards; **space weather effects**.

Expected outcomes

- A pre-operational capability.
- Integrated analysis capability and models for vulnerability aspects.
- Improved models for the different specific areas (e.g. forest fires propagation, flash floods propagation).
- Improved fusion of data available from satellites and from in-situ measurements.