

SWAN: Space Weather Applications Network.

[Integrated Project]

- Aims – “*maximise the use of and further develop existing space weather resources, creating a European network of integrated space weather services, establishing Europe as a major area for space weather research and applications*”
 - Further understanding of space weather and space environment
 - Improved forecasting of space weather events and effects
 - Increased education and awareness
- Approach
 - Development, exploitation and integration of data sources
 - Application of large scale simulations of the solar terrestrial system
 - IT integration
- Integration with ESA activities
 - Involve integration of ground based measurements and other space weather effects not normally within the remit of ESA.
 - will complement the activities of the pilot project and
 - lead to continuation and further development of services after its completion.

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EU Expressions of Interest

1. EASE (Effects on Aircraft and Satellite of space Environment) by Francois Lefeuvre,
2. SATPRO (Protection of Telecommunication and Navigational Satellite Operations) by Richard Horne,
3. Eu-ISWP (An Integrated Approach to creating a European Space Weather Programme) by Bob Bentley
4. WATCSA (Wide-Area, Time-Coherent Sensor Arrays) for a solar radar (LOFAR/LOIS) by Bo Thide,
5. SWEEC (Space Weather Effects on Earth's Climate) by Peter Stauning.
6. SACE (Solar Activity and Climate in Europe) by H. Lundstedt
7. SWAN (Space Weather Applications Network) by TOS-EMA/ESA
8. MOPLE (MONitoring the geo-PLasma Environment) by N Jakowski
9. CRISIS (Natural Disasters in Europe: Comprehensive Risk Assessment and Information Strategies) by Bruno Merz
10. SpaceRad by Roberto Battiston

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Framework 6 Relevance

- *Integrating and strengthening the European Research Area*
 - 1.1.2 Information Society Technologies
 - 1.1.4 Aeronautics and space:
 - Aircraft Safety, flight operation procedures, reliability of satellite navigation systems, development of operational services
 - 1.1.6 Global change & ecosystems
 - 2.3 Radiation protection
- Cross-thematic projects?
- Conversion of R&D results into products with clear benefit for society

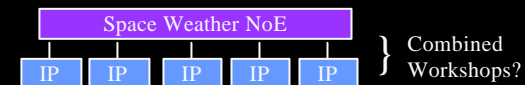
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Possible Coordination

- 4 Networks of Excellence
- 5 Integrated Projects

How can these be 'integrated'?



One ground-based and one space-based proposal?

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Possible Core Activities

- Start with identification of areas in need of research – ideally this might be covered by networked IPs
- Coordination of expertise and facilities between institutions: data exchange, operational models, web-based IT, GRID....
- Cross-disciplinary training (collaboration between institutes)
- Scientific papers (multi-author/institute)
- (bi-)annual report of findings
- (bi-)annual conferences. Coordinate with ESA and COST 724 to create a "European space weather week" ?

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Incorporation of SMEs

- Experimental e.g. ground based, rocket or balloon launched experiments.
- Application development: ESA studies showed customers willing to pay for some value-added services.
- Cost-benefit analyses
- Education and outreach

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Organisation & Coordination with ESA & COST 724

- Network organisation: governing board, team of experts responsible for monitoring progress of each IP.
- External scientific advisory committee
- Interface with ESA pilot project: SWSB and SWWT meetings.
- COST interaction?
- Coordinate workshop/conference activities "European Space Weather Week"

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Discussion with EU Representatives

- Meeting scheduled for 8th October 2002 with Luc Tytgat "Space Research Policy and Coordination Unit"
- Could the Eols have a chance to open or extend the FP6 objectives and activities to subjects related to Space Weather.
- Priority 1.1.4 objectives are presented in restricted manner: is there scope for inclusion of environmental effects?
- Scope for space weather in the context of global change and ecosystems
- Could "radiation protection" be extended to include man in space?

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