EASE (Effects on Aircraft and Satellite of Space Environment)

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1. HYPOTHESES

- **The thematic « Space Weather », will not be included in the final AO** (if it appears, EASE may be a subset of a more general proposal)

- **The final work programmes will extend thematic already included in Aeronautic and Space :**

- « increase aircraft safety »
- « Galileo exploitation »
- « use of GMES for specific demands such as planetary environments »

2. Main issues

- **Satellite and launcher technological systems**
- **Aircraft technological systems**
- **Low Earth orbits**
- **Telecommunication and Navigation systems**
- **Human in space**

3. Expected results

Expected results	Users
Better physical understanding of the Earth space environment	scientists, public, aerospace industries, other SW users
Better specification of the Earth space environment, especially in worst cases	scientists, aerospace industries
Better instrument design and better monitoring of the environment	scientists, aerospace industries
Improvement of the European facilities for testing components and instruments to radiations	aerospace industries, satellite users
Improvement of the diagnosis on the anomalies observed on satellites, launcher and aircraft	aerospace industries, satellite users, insurance companies, airlines
Improvement of prediction of solar events and effects on : -satellites (electronic, orbit, communications) - launchers (technological systems) -Aircraft (electronic, communication, radiation)	satellite operators, launchers, satellite users (including navigation), astronauts, air passengers, air crews

4. Integration activities

1. Users

- Committees of experts in charge of recommendations and standards
- Integrated technical teams for analysis and diagnosis
- Analysis group in charge of societal returns

2. Services

- sub-network of facilities for exposure to radiations
- Sub-network of environmental data centres
- Sub-network of forecasting services (sharing responsibilities and tasks)

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3. Model developers

- sub-network of research groups for characterization of Sun/Earth interactions and models
- Integration Centre
- Technical centre
- Sub-network of scientific and research groups for the development of specific models

4. Observations at ground and in space

- sub-network of ground-based and space experimenters, for continuous measurements and coordination
- Sub-network of ground-based and space experimenters, for future projects derived from the present situation

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5. Education, training

- link between research scientists and users
- Education of research-students, researchers and technical staffs
- Education of students
- Education of public

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5. METHOD

- **Define limited objectives from the user needs**
- **Define tasks to be done to fulfil the objectives**
- **Integrate all the European groups who may contribute to the tasks :**
  - at the time of the answer to the AO
  - during the course of the contract

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