SWWT Chairman's Summary 17th December 2001

THE EUROPEAN SPACE WEATHER PROGRAM AND THE SPACE WEATHER WORKING TEAM

Before the 17-19 December Workshop "Towards a European Space Weather Program", it is good to report on 20 months of activity of the Space Weather Working Team.

Constitution:

When ESA decided to start an evaluation of a possible European Space Weather Program (ESWP) through two contracted studies, it established in parallel a informal body, the Space Weather Working Team (SWWT) consisting of individuals (mainly but not only scientists) involved in Solar-Terrestrial relationships and their effects on technological systems and human health.

The first meeting of the SWWT took place during the European Geophysical Society Assembly in Nice in April 2000. All together the team met 6 times, usually for 2 days, in different places: Noordwijk, Paris, Darmstadt, London. At these meetings (which were attended by ~ 30-40 people) progress reports by the two contracting groups (led respectively by ALCATEL+LPCE and RAL+ASTRIUM) were presented and discussed. Complementary comments about these reports were made by the SWWT members and sent through e-mail.

Main actions:

Different initiatives were taken by the SWWT:

Contacts have been established with the European Space Science Committee (ESSC), a committee from the European Science Foundation (ESF) which serves as an expert on space studies to the European Commission (EC). Following exchange of information between the SWWT and the ESSC, this committee has issued a recommendation to the ESF and the EC to support the launch of a European space weather initiative and to begin a modest study program on that subject.

The SWWT is preparing a proposal to be included in the EC/COST program (COordination in the field of Scientific and Technological research). Inscription in the 6th Framework program of the EC is also under a lobbying process.

Contacts have also been established with EUMETSAT whose spacecraft and space operational facilities could be used for making and recording environmental space parameters. A specific project of cooperation between ESA and EUMETSAT will be submitted and discussed at the beginning of next year.

A "Briefing Package" explaining what are space weather effects and what could be the benefits of establishing a European Space Weather Program (ESWP) has been prepared for circulation among national space and/or environmental authorities. A copy of this pack is supplied with this document.

Attempts were made to include the ESWP in the discussions which took place at the last ESA ministerial Council (Edinburgh, 12-13 November this year). This was not feasible since the project was not mature enough and since the Council had more important matters to discuss (including GALILEO, GMES, and the science budget). Nevertheless the technological, economical and societal importance of a Space Weather Program was recognized at different occasions during this Conference.

Under the leadership of the ESTEC/TOS-EMA department an in-house study of a possible space segment for an ESWP was performed by using the ESTEC Concurrent Design

Facility (CDF). This study was based upon a subset of the space and ground segment suggestions made by the two contractor teams and the SWWT comments. Its results were presented at the Final Presentation Day of the two contracts (6-7 December) and will be reported at the workshop. Of course, differences exist between the two proposed contractors strategies. These differences will be the subject of future evaluation.

The future:

At present the two contractor teams have achieved their study (see above). The results of these studies have provided a clearer view of who are the potential users, what their needs are and how these could be satisfied. A "Pilot Project" for the next 2 or 3 years is in the process of being defined, so that a detailed proposal could be presented at the next ESA Council in 2004. To steer this project new structures must be implemented, which will involve (in a different manner) scientists, users and decision makers.

There are still problems which have not been solved:

- to which extent should the concept of European "autonomy" be satisfied?
- what are the exact "benefits" (in financial terms) of implementing an ESWP?
- who, besides of ESA, are the possible contributors to such a program?

But all together the SWWT has been very useful in the evaluation process of such an important environmental problem and of the role which space research, space technology and space modeling could bring to its mitigation. The SWWT members shall be thanked for their enthusiastic and efficient contribution to this process. No doubt that the scientific community as a whole will contribute to the definition and to the implementation of the future European Space Weather Program.

Roger Gendrin, chairman of the SWWT, December 10, 2001.