

spacecraft and cross-calibration of measurements.

One meeting proposal for the 2006 Scientific Assembly was submitted, namely: 'Empirical and theoretical models of the geospace radiation environment'. The proposed event complements the bi-annual radiation belt workshops organized in years when there is no COSPAR Assembly.

The possibility of promoting the Panel to the status of a Sub-Commission or merging it with an existing Sub-Commission was discussed. The meeting expressed a strong preference for the Panel to continue in its present form. However, since the scope of the Panel has expanded from radiation belts to include solar energetic particles and cosmic rays, the Associates propose that it be renamed as the 'Panel on Radiation Environment Modelling (PREM)'.

Panel on Space Weather (PSW) - Report prepared by A.M.F. Hilgers (Chair, PSP)

At the Panel's business meeting on 21 July, Dr Hilgers advised the terms of reference for the Panel and the current list of officers

The Panel's events at the 35th Scientific Assembly were briefly reviewed. The PSW1 session comprised 35 oral and 26 poster presentations, considered overall to have been of good to very good quality; the event was co-sponsored by ISES which helped two of its members to attend. The focus on applications was clear and thereby avoided the risk of duplication with other Commission D and C events. Both sessions (PSW2 and PSW1) were well attended and the room with capacity of ~70 was considered appropriate. However, the lack of interaction between event organizers was regretted.

It was noted that business meetings of a various organizations that impact on the study of Space Weather took place on the margins of the COSPAR Assembly, including:

The International Space Environment Service annual assembly (Palais des Congrès, 18 July).

The Space Weather Working Team (SWWT) bi-annual meeting (Ministère de la Recherche, 19 July).

Programme Committee for the 1st European Space Weather Week (ESA-HQ, 20 July).
The SWWT Topical Working Group on Programmatics (Palais des Congrès, 21 July).

CAWSES - Climate and Weather of the Sun-Earth System (a SCOSTEP programme), including a CAWSES WG1 meeting (Palais des Congrès, 22 July).

Reviews were undertaken of various other collaborative activities relevant to PSW including:

The operation of the International Space Environment Service (ISES).

ESA's Space Weather Pilot Project (space weather prototyping activity co-funded by ESA and other member state organizations).

Space weather working team (European expert forum set up by ESA)

COST 724 Action: Developing the Scientific Basis for Monitoring, Modelling and Predicting Space Weather (started 2003).

COST 271 Action: Effects of the Upper Atmosphere on Terrestrial and Earth-Space Communications (ending 2004).

Preparations for the International Polar Year (IPY).

Preparations for the International Heliophysical Year (IHY).

Preparations for the electronic Geophysical Year (eGY).

Scientific Committee on Antarctic Research (SCAR).

The International Living With a Star (ILWS) Programme.

In the ILWS context, it was noted that a number of recent events could have significant impacts on space weather activities. In the US, NOAA/SEC has been moved from the research

division of NOAA to the National Weather Service division (*cf.* presentation by J. Kunches at PSW1). The NASA portions of ILWS, LWS and STP are entering a turbulent phase due to strategic re-orientation. Several of the future STP missions have been delayed (e.g., Magnetospheric Multiscale mission) or have become very uncertain. Meanwhile, other countries (including Canada and China) are providing enough driving effort in the international programme to allow a timely start of the first ILWS phase in 2009. An ESA Earth Observation mission (SWARM) will now become a part of the initial ILWS phase as ESA's first 'IT-mission'. ESA has also established a pilot network of Space Weather Services in the frame of its R&D programme. It is also expected that the new European positioning programme, GALILEO, will raise new requirements for space weather service in Europe and world-wide. It was also noted that space weather has become an important item in the SCAR agenda.

Three proposals for PSW events at the 2006 COSPAR Assembly were submitted directly to the Panel Chair, and it was agreed to merge the three proposals into one with the following objectives:

- To discuss multi-disciplinary and collaborative efforts being made in order to respond to the noted increasing needs for space weather services;
- To discuss specific observational and data processing requirements for space weather applications (including for space climatology);
- To review existing resources (including scientific missions and instruments);
- To consider possible improvements (quality, longevity, integrity...) and IT infrastructure developments;
- To consider associated data analysis, modelling and theory activities;
- To discuss related developments: ILWS, IHY, IPY, ILWS, GPS, Galileo data exploitation and their potential interest for future operational systems.

Professor L. Dorman expressed his intention to propose a colloquium on Cosmic Rays and Space Weather to be held in 2005 or 2006 in Israel.

The results of the call for inputs for the reflection on COSPAR's future, sent out last May, were presented and some further comments were made. Comments and suggestions that may be of general interest to COSPAR are listed below.

Advance in Space Research should have a much faster publication process, and it is hoped that the recent changes aiming at this result will turn out to be successful.

(a) There should be more time and facilities for business meetings at the Scientific Assemblies.

(b) There should be more initiatives to encourage the participation of young people in the Scientific Assembly. A suggestion was made to encourage invited papers presented by young scientist since it helps them to get funding for the travel.

(c) The focus on multi-disciplinary sessions should be increased, by increasing the importance attached to the Panels (in terms of number and event allocation) as these tend to be more multi-disciplinary in character than some of the Commissions (which tend to duplicate the structure of other scientific organizations such as IAGA or URSI), and by facilitating the participation of experts from outside the traditional COSPAR communities.

(d) For one day attendance, there should be a greatly reduced fee thereby favouring and facilitating the participation of external experts and of more people in general, particularly young people.

Other suggestions more specific to the Panel's own activities were made, and will be taken into account by the Panel Chair for future orientation of activities, but do not as such lead to suggestions for more general COSPAR structural evolution. The suggestions pertaining to PSW's role were:

- Ionospheric phenomena and the effects on navigation and telecommunication should be mentioned in COSPAR's publicity on the role of the PSW;

- The terms of reference should not only focus on the deleterious effects of space weather, but should also address the effects in general such as global change;

- A main Panel session should focus on operational quantitative prediction (and forecast) issues (as now);
- Another, more scientific session on space weather (i.e., less related to operations), should be organized on a regular basis, possibly in conjunction with Commissions D and C;
- The Panel should be more active (and possibly take the lead among other scientific organizations) in forging links between the scientists studying space weather and the users of the data;
- PSW could put more emphasis on coordination between ground-based and space-based instrumentation for space weather monitoring;
- The Panel should pay attention to calibration and inter-calibration of space weather observations;
- The Panel could pay attention to technology transfer aspects;
- The Panel should seek the collaboration of the developing countries in studies of world-wide space weather activity (perhaps by the organization of a workshop and/or by encouraging the exchange of experts).

Panel on Planetary Protection (PPP) – Oral report to the Council by J.D. Rummel (Chair, PPP)

Panel members discussed primarily the current planetary protection policy and desirable changes to it. These issues will be examined in events to be organized for the 2006 Assembly and through activities organized between the Committee's biennial meetings.

Panel on Capacity Building (PCB) - Report prepared by A.P. Willmore (Chair, PCB)

The arrangements for publication of contributions presented in Paris were described, and proposals for events for the Beijing Assembly were discussed. There was also a suggestion for a capacity building workshop 'back-to-back' with the 2006 Assembly on a topic for which suggestions might be solicited from Chinese Committee for COSPAR.

The following proposals have been received for future COSPAR capacity building workshops:
Planetary Science, Harbin, China

Planetary Science, Mexico
X-Ray Astronomy (*Chandra/XMM*), Hunan, China
X-Ray Astronomy (*Chandra/XMM*), Turkey
Space studies of the Amazon region, Argentina

(g) **Resolutions and Recommendations**

The COSPAR Council, at the second session of its meeting, approved two recommendations and one internal decision:

Recommendation No. 1/2004 (proposed by Scientific Commission A)

As it is in the interest of COSPAR to have sustained satellite and in situ data with minimal data gaps, at minimal cost, and with minimal time delay in order to maximize the utility of satellite Earth observations, COSPAR endorses the Global Earth Observation System of Systems (GEOSS) and is ready to participate through its scientific activities.

Recommendation No. 2/2004 (proposed by the Panel on Capacity Building)

COSPAR intends to take steps to improve coordination in capacity-building activities amongst the members of the ICSU family and other key space partners working in this area.

Internal Decision No. 1/2004 (proposed by the COSPAR Finance Committee)

COSPAR approves the financial statements on the execution of the 2002 and 2003 budgets as presented at the first Council session of the 35th COSPAR Scientific Assembly, and noting that the budget for 2004 has been approved by the Bureau in conformity with the authorization given to the Bureau by the Council, resolves that the draft budget for 2005 be accepted as the provisional budget, and further resolves that the Bureau be authorized to modify the 2004 budget as required to take into account changes agreed during the 35th COSPAR Scientific Assembly, or resulting from the financial transactions of this meeting, and that the Bureau be authorized to approve the final budgets for 2004 and 2005 as well as the draft budget for 2006 and the amounts of national contributions for 2006 and 2007, there being no Council meeting in 2005.

(h) **National Reports on Space Activities**

COSPAR encourages its members to exchange information on space research activities carried out within their countries. One way of doing this is by producing reports summarizing space science activities. Generally, but not always, these reports are published in time for distribution in limited quantities at the COSPAR Scientific Assemblies. The following reports are now available from COSPAR members: Australia (available on the web at <http://www.science.org.au/natcoms/cospar2004.pdf>), Austria, Canada, China, Finland, France, Hungary, India, Netherlands, Pakistan (available on the Web at <http://www.suparco.gov.pk>), Russia, Slovak Republic, Switzerland, and Ukraine. A report on ESA activities is also available.



The 36th COSPAR Scientific Assembly stand in Paris.

(i) **36th COSPAR Scientific Assembly, Beijing, China, 16 - 23 July 2006**

The organizers of COSPAR's 2006 Scientific Assembly reported briefly on the recent remarkable successes of the Chinese space programme (manned flight, *Double-Star*, etc.) and indicated how enthusiastic the Beijing municipality and the national scientific community are to host the Committee's 36th Scientific Assembly. The Assembly will be organized by the Chinese National Committee for COSPAR (CNCOSPAR) and the Center for Space Science and Applied Research (CSSAR). Numerous sponsors have already been enlisted including the Chinese Academy of Sciences (CAS), the Chinese National Space

Agency (CNSA), the Ministry of Science and Technology (MOST), the China Association for Science and Technology (CAST), the China Academy of Launch Vehicle Technology (CALT), the China Academy of Space Technology (CAST), and the Beijing municipal government.

The Assembly will be held at the China World Trade Centre, Beijing's largest and most well-located complex which includes a number of hotels, a congress venue, and an exhibition centre. Plenty of accommodation and food outlets are available within the centre, with less expensive options in the immediate vicinity. The centre is on a subway line, and infrastructure is already in place for web access. Professor R.-L. Xu (CSSAR) will serve as Chair of the Scientific Programme Committee (PC).

The Council agreed to the registration fees, below, which are in US dollars and represent for the first time in many years a reduction from the fees levied at the previous Assembly, assuming a more or less steady rate of exchange between the dollar and the Euro:

	Early	Pre-Congress	On-site
Full participants:	\$ 450	\$ 550	\$ 600
Students:	\$ 100	\$ 150	\$ 200
Accompanying persons:	\$ 100	\$ 150	\$ 200
Press:		no charges	

Proposals for scientific events submitted by the Scientific Commissions and Panels during the Paris Assembly are listed below as a preview of the interesting discussions that will be held in Beijing. Note that the list below is preliminary and will be modified by the Scientific Programme Committee, to a greater or lesser degree, in order to minimize parallel sessions, maximize inter-commission coordination, and respond to imperatives set down by the Bureau concerning the general organization of the Assembly. Inter-commission events are listed only once. A proper overview may be obtained by scanning the entire list, particularly important for the Associates of Commissions that organize numerous joint events, e.g., D and E.