

Minutes

IAA COMMISSION 1 MEETING Space Physical Sciences

Palais des Congres, Paris France
Held during the COSPAR Scientific Assembly
22 July 2004

Meeting Attendance :

I. Almar, E. Antonucci, D. Baker, G. Bignami, R. M. Bonnet, J. Burch, M.L. Chanin, J.M. Contant, J.L. Culhane, G. Haerendel, D. Halpern, W. Hermsen (Secretary Commission 1), S. Holt, W. Huntress, W. Ip, S. V. Korepanov, S. Krimigis, V. Kuznetsov, C. Lardier, C. Maccone, M.E. Machado, H. Moulin, H. Rickman, M.A. Shea, E. Stone (President), P. Velinov, P. Wenzel (Chair Commission 1) , Y. Yatskin, L.M. Zelenyi, J.V. Zimmerman.

Agenda

- 1 Welcome
- 2 Ceremony for 2003 IAA Section 1 new members
- 3 Meeting objectives & summary of Academy Commission 1 activities - 'Next Steps in Exploring Deep Space'
- 4 Discussion on future Commission activities - ideas/proposals for new Study Groups
- 5 Rejuvenation of IAA membership
- 6 Next Commission 1 meetings
- 7 Any other business

1 Welcome : Peter Wenzel (Chair Commission 1) opened the meeting and welcomed the large (30) number of Academicians present.

2 Ceremony for 2003 IAA Section 1 members: The IAA President Ed Stone took the occasion of this extra Commission 1 meeting for handing over the IAA membership certificates to several new members elected in 2003. He thanked Peter Wenzel for organizing this meeting and reminded the participants of the next Academy Day which will be held in Vancouver on 3 October.

The new IAA Members honoured included David Halpern, Steve Holt, Marcos Machado, Hans Rickman, and Margaret A Shea.

3 Meeting objectives & summary of Commission activities: Peter Wenzel summarized the meeting objectives, namely i) This is a meeting of opportunity : 'bring IAA to the scientists', assembled at the COSPAR Scientific Assembly in Paris; ii) How can scientists in the academy usefully contribute to work of the Academy?; iii) Develop/solicit new ideas for Study Groups.

The background to the meeting objectives were that i) the IAA is dominated by engineers & managers; scientists are in minority; ii) IAA meetings centre around IAC/IAF events; iii) Commission 1 meetings generally held at IAC events, were

therefore poorly attended; iv) A major Study Report 'Next Steps ...' was just published.

Peter Wenzel reminded the participants of the goals of Academy Commissions, namely to conduct meetings for the exchange of information & ideas amongst Academicians, to provide occasions for initiation of new ideas and to oversee the work of the Study Groups. Commission 1 on 'Space Physical Sciences' is one of six Academy Commissions.

Commission 1 Membership (2003 – 2005): Peter Wenzel (chair), Wes Huntress (vice chair),

W. Hermsen (secretary), C. Cesarsky (Section1 representative), C. Sallaberger (S2 repres.), D.O'Handley (S3 repres.), V. Manno (S4 repres.), J.C. Gerard (member), D. Halpern (member), L.M. Zelenyi (member).

Recent Commission 1 activities were: the organization of the Laurel Team award event for SOHO at the Bremen IAC (Sept. 03); Two Commission 1 meetings (Sept. 03 & March 04); coordination of proposals for techn. sessions & plenary events for IACs at Vancouver (Oct. 04) and at Fukuoka (Oct. 05); most importantly the conduct of the peer review process of the Cosmic Study Next Steps in Exploring Deep Space'. This international Study had been led by Wes Huntress. The final study report was released at the start of the COSPAR Assembly on Monday 19 July in a press conference at ESA HQ. It is posted on the IAA web site.

W. Huntress then commented on this IAA Cosmic Study which provides a vision for the scientific exploration of deep space beyond Earth orbit in the first half of the 21st century. The report will be forwarded to and hopefully be of use to agencies and other organizations addressing space policies. It might be regarded as input to the 'bottom up' discussion that has been initiated by the recent announcement of the US President with space exploration as its prime focus.

4 Discussion on future Commission activities – ideas/proposals for new Study Groups

There was a lively discussion on these topics. The ideas & comments, to be taken as input for future considerations in the IAA, included:

- the topic of nuclear propulsion in space, which is very controversial but at the same time very important for solar-system exploration (S. Krimigis). This could result in a study group: what science is enabled by nuclear propulsion?
- G. Haerendel noted that the European Science Foundation (ESF) has this as a future topic and suggested a risk evaluation, not necessarily led by Commission 1; S. Krimigis: risks and perceptions should be addressed. W. Huntress noted that the US Academy is conducting a risk study.
- J. Culhane stressed the possibilities and importance of multi-commission activities within the IAA;
- MA. Shea and J. Burch pointed at the dangers in human exploration, e.g. due to radiation;
- W. Huntress raised a few questions for further consideration:
 - i) How to assemble the large astronomical facilities in SEL2 and how to service these, etc. ?
 - ii) What is required for preparing for Mars exploration? How much utility does the Moon have? What measures will reduce the risk to go to Mars?
 - iii) What can humans do what cannot be done by robot; is there a science case?
- the organisation of a (science) symposia at every IAC meeting.

5 Rejuvenation of IAA membership

The IAA is actively soliciting the nomination of candidate scientists who are among the younger leaders of the international space science community. It is therefore a special responsibility of the established IAA members to put forward such nominations. It was pointed out that young scientists attend COSPAR meetings, as has been obviously the case in Paris this week, but do not know of the existence of the IAA, which mostly organizes its activities in connection with IAC meetings. Bonnet stressed again that the IAA is not known to scientists in general. Therefore it is important to propose scientists, in particular younger ones, for IAA membership. Candidates for election in 2005 can be put forward till the end of the year.

5 Next Commission 1 meetings

- Commission 1 Commission meeting, Sunday 3 October 2004, Vancouver
- Commission 1 Commission meeting, Tuesday 22 March 2005, Paris

Ivan Almar drew attention to the First IAA International Conference 'Impact of Space on Society', 17 – 19 March 2005, Budapest.

6 Any other business

There was none. Peter Wenzel thanked all participants and closed the meeting.