

International Academy of Astronautics

Commission 5

Report on Meeting

**Prague, Czech Republic
Sunday 26 September 2010**

1/ Attendance

There were 31 participants in attendance, including 6 members of the Commission.

Sergio Camacho, Chairman

Max Grimard, Co-Chairman

Kai-Uwe Schrogl, Past Chairman

Corinne Jorgenson, Secretary

Elizabeth Back-Impallomeni, Luce Fabreguettes, Werner Balogh, Ernst Fasan, Bernhard Schmidt-Tedd, Frances Brown, Ray Williamson, Mathias Spude, Nicholas Johnson, Geir Hovmork, Mahulena Hofmann, Marc Haese, Jana Robinson, Walter Flury, Heiner Klinkrad, Scott Pace, Lubos Perek, Matxalen Sánchez-Aranzamendi, Christina Giannopapa, Marietta Benkö, William Ailor, Debra Facktor Lepore, John Logsdon, Henry Hertzfeld, Anrea Kliensasser, Michael Simpson, Claire Jolly

2/ Adoption of the agenda

The agenda, which had been distributed before the meeting was adopted.

3/ Adoption of the Minutes of Commission V Meeting in Paris, March 23, 2010

The minutes, which had been distributed before the meeting and are available in IAA website were adopted.

4/ Commission V Symposia

4.1 Review of IAC 2010 Prague

Session E3.1–New Developments in National and International Space Policies and Programs
One and half session, chairs and rapporteur are OK, number of uploaded papers : 19 over 23 planned

Session E3.2–Policy and Economics Aspects of Space Weather
half session, chairs and rapporteur are OK, number of uploaded papers : 6 over 6 planned

Session E3.3–The Space Economy in Figures

Full session, chairs and rapporteur are OK, number of uploaded papers : 10 over 13 planned

Session E3.4–Protecting the Environment of Celestial Bodies

Full session. The final report of the study group will be presented (see § 6.1).

Full session, chairs and rapporteur are OK, number of uploaded papers : 3 over 7 planned

Session E3.5–24th IAA/IISL Scientific-Legal Roundtable : The new age of small satellite missions

Full session, chairs and rapporteur are OK, number of uploaded papers : 1 over 5

4.2 Status of Symposium E3 for IAC 2011 Cape Town

The 24th 23rd IAA Symposium on Space Policy, Regulations and Economics will provide a systematic overview of the current trends in space policy, regulation and economics, by covering national as well as multilateral space policies and plans. Specific focus for 2011: space policies for Africa, and Long Term Sustainability of Space Activities, the latter of which is related to the topics of two new IAA Cosmic Study project proposals by Commission V: Orbital Debris Removal and Space Weather. The symposium also integrates the 26th IAA/IISL Scientific-Legal roundtable, which will deal with Space Debris Remediation.

In keeping with the theme of the IAC for 2011, the topics of the sessions have been selected to focus on Africa and the Co-Chairs of two sessions are from Africa and a third one is being sought.

Coordinators:

Sergio Camacho, CRECTEALC (Regional Centre for Space Science and Technology Education for Latin America and the Caribbean) Mexico, sergio.camacho@inaoep.mx

Max Grimard, EADS Astrium, France, max.grimard@astrium.eads.net

- *E3.1 National and International Space Policies and Programmes for African Development*
This session will provide a forum for the presentation and discussion of current space policies, programmes and initiatives that aim at supporting the development of Africa. Speakers from African countries and organizations will present their needs and plans, while others from non-African countries and international organizations are invited to present their space policies, programmes and initiatives that can support African development through international cooperation.

Chairs :

Max Grimard

EADS Astrium - FRANCE

Joseph Akinyede

ARCSSTE-E - NIGERIA

- *E3.2 International Space Exploration Policies and Programmes*

Space exploration is an important space policy domain that has been gaining momentum in recent years topping the space S&T policy agenda in many countries. Space-faring countries and international organizations have long been involved in human and robotic exploration

but emerging space actors are increasingly getting involved in the field as well. International cooperation plans and partnerships are also increasingly leading to a new space exploration context. This session will provide a forum to reflect on the trends in space exploration and present the latest developments in the field.

Chairs :

Nicolas Peter

European Space Agency HQ – FRANCE

Pascale Ehrenfreund

George Washington University – USA

- *E3.3 The space economy in emerging countries*

This session aims at providing a picture of the situation of space developments in emerging space-faring countries in terms of economic models (e.g. PPP with more private actors' involvement in space operations), new markets (e.g. telecom, remote sensing) opening up for space industry actors, and technology transfers (e.g. joint ventures).

Chairs :

C. Jolly

OECD – FRANCE

- *E.3.4 Assuring the Long-Term Sustainability of Outer Space Activities*

The long-term sustainability of space activities is a matter of common concern for all current and future space actors. The increasing number of countries and private operators operating space systems and the growing amounts of space debris raise important questions about continuing to operate spacecraft in Earth orbit over the long term. Frequency management to prevent interferences, and influence of space weather are other critical issues

This session, which will support the activities of the Working Group on the Long-Term Sustainability of Outer Space Activities of the United Nations Committee on the Peaceful Uses of Outer Space, will explore the policies guidelines and application of the legal provisions of the outer space treaties that will be needed to assure long-term sustainability.

Chairs:

Peter Martinez

South African Astronomical Observatory - SOUTH AFRICA

Agnieszka Lukaszczyk

Secure World Foundation – USA

- *E3.5. 26th IAA/IISL Scientific-Legal Roundtable: Towards Space Debris Remediation (Invited Papers only)*

Space debris mitigation has received a global recognition and regulatory framework through the 2007 Space Debris Mitigation Guidelines of UNCOUOS. The next step in securing a space environment, where the threat through space debris is limited to the greatest extent, is putting in place space debris remediation measures. Building on the results of an IAA study on this topic technical, policy and regulatory aspects will be investigated in this interdisciplinary roundtable composed of selected experts in the respective fields.

Chairs:

Kai-Uwe Schrogl

European Space Policy Institute (ESPI), AUSTRIA

Wendell Mendell

National Aeronautics and Space Administration (NASA), UNITED STATES

In the frame of the proposed specific focus on “Space for Africa, Africa in Space”, the possibility to give a specific visibility to Session E3.1 was discussed. Financial support from Space Foundation (R. Williamson) was proposed : posters, advertising, larger room, ...

4.3 Collection of ideas for topics to be considered for 2012 Symposium in Napoli

The following topics were proposed by the participants :

- Possible follow up topic on the outcome of the Summit of Heads of Space Agencies (to be examined when results are available)
- Examine a possible topic on the occasion of the conclusion of the long-term work plan of COPUOS on space weather
- Review policies for remote sensing associated with data access, privacy of data
- Space situational awareness
- Topic associated with economic aspects of space utilization
- The IAA/IISL Round Table topic will be discussed during the meeting of the IAA/IISL Scientific-Legal Liaison Subcommittee

The structure of the Symposium will be finalized during the March 2011 Commission meeting.

4.4 Stand alone conferences

The SAC has requested the Commissions to prepare a list of stand-alone conferences for 2011 and 2012. The following conferences have been identified for Commission 5 :

- Planetary Defense Conference, Bucharest, Rumania, 9 – 12 May 2011
- ISU Conference on implications of extending the lifetime of the International Space Station
- IAA/ISPRS session on policy aspects of monitoring treaty agreements using EO satellites, (Australia, 2012)

This list will be completed after the IAC and transmitted to SAC Vice-President for Scientific Activities.

4.5 Other Conference related items

Information was given by M. Snitch about the status of the Heads of Space Agencies Summit.

Information was given on the new IAA Study Centre in China (publications) and the IAA Branch in India (Conference Centre). The participants requested more information on what

each of these centres will do and how their work will affect the Commission's work. For the Beijing Centre, K.U. Schroegl (VP Publications) explained that they will provide a logistic support, with the purpose of harmonizing the formatting of the publications, to develop an IAA corporate image. The Commissions will keep the responsibility of approving and launching the study groups, and to organize reviews and acceptance of the study reports. K.U. Schroegl reminded that the members of Commissions have the duty to contribute to the reviews when they are requested.

6/ Commission V Study Groups

6.1 Status of Study Group on-going Activities

S5.5 Space Debris Environment Remediation (Klinkrad, Johnson)

Study is on track, with a first consolidated draft of ~ 100 pages. The study addresses both technical and legal issues. The study is planned for Board of Trustees approval in mid-2011 and its results could be presented to COPUOS; It is not clear who would presents it, as the practice of delegations for the USA and ESA is for its members to remain behind their corresponding nameplates (i.e. they could not sit behind the IAA nameplate)

For future activities, the Co-Chairs would prefer that Space Debris stay in Commission V, and coordinate with other interested/relevant commissions

S5.6 Protecting the Environment of Celestial Bodies (Hofmann, Rettberg)

Peer reviewed-Study has been accepted by Commission V and transmitted to SG and SAC with recommendation for publication. Further to the Commission V meeting, the SAC gave approval for publication.

M. Hoffmann, study co-chair, expressed her disappointment about the length of the review and approval process, which has prevented the study publication for the IAC. S.Camacho explained the new constraints imposed by the IAA for the Peer Review (5 reviewers, from 5 different countries, and covering all the sections). Request shall be transmitted to the SAC to get support for a faster implementation of the Peer Reviews.

S5.8 Space Systems as Critical Infrastructures (Piso)

No information given (Chair was absent) and did not reply to an email sent prior to the IAC. The membership is not completed. This study group should be considered for termination at the March 2011 meeting if no progress has been made.

S5.9 International Cooperation on Space Weather (Baker, Balogh, Paxton)

The group has 19 members, has held one meeting on the margins of COPUOS; and will have a session on this item during IAC 2010. The target for publication is October 2012.

6.2 Proposed Study Groups

Orbital Debris Removal: Policy, Legal, Political and Economic Considerations (Hobe, Williamson)

The establishment of the members of the study group will be made during Prague IAC, with a formal kick-off targeted early 2011.

7/ **Acta Astronautica**

Kai-Uwe Schroegl reported that a good number of papers have been submitted. He also encouraged members to prepare articles as Acta Astronautica is not limited to IAC papers. He noted the difficulty to open Acta Astronautica to papers on economics.

9/ **Date of next meeting**

The next Commission V meeting will be held at the IAA, 6 rue Galilée, 75116 Paris, on **March 22, 2011; 9h – 11h00**

Being no other business the meeting adjourned.