

International Academy of Astronautics

6, rue Galilée, 75116 Paris

<http://www.iaaweb.org>

Commission 4 Space Systems Operations and Utilization

AGENDA

21 March 2016 – 13h30-16h00

6, rue Galilée, 75116 Paris

Attended by:

Tibor Balint - Secretary

Igor Belokonov

Filippo Graziani

Olexandr Kashanov

Rene Laufer

Roberta Mugellesi

Mikhail Ovchinnikov - Chair

Manola Romero

Rainer Sandau

Sakurako Takahashi

1. Welcome

Commission Chair

2. Adoption of the Agenda

Commission Chair

M.Ovchinnikov informed members of the Committee about the content of a General Meeting, which was held just before the Meeting of Commission #4.

A key message from the GM related to paying attention to IAA copyright issues when preparing the study reports. Other message from the GM included attendance request to the upcoming 3-day conference in Moscow between May 24 and 26. This session is planned with 7 sessions, and the outcome, in the form of a recommendation, will be forwarded to the Heads of Agencies meeting, which is scheduled for the spring of 2017. Furthermore, IAA is set up a Cloud storage for the report, but still working out the access privileges, so members can access the files, but can't accidentally delete information from the server.

3. Adoption of the Minutes of Commission 4, Jerusalem, October 10. 2015

Commission Chair

The meeting was briefly discussed and the attendees concurred with the summary.

4. IAA Cosmic Studies

4.1 Current Studies

Study Group 4.8 Chair or representative: Esper/D'errico/Herrel/ Mendham Title: Space Systems Cross-Compatibility

Following discussions between the study leads and IAA it was requested to remove parts impacted by Intellectual Property rights. The study leads concluded that without those parts the study does not fulfill the standards of an IAA study. Consequently, instead of the Report, the study leads converted the report into a conference publication. I was presented at the IAA Small Satellite conference in Berlin, in 2015. Furthermore, the paper was included in Proceedings of the Berlin's 10th Conference Small Satellites for the Earth Observation.

We have discussed study report outcomes, and concluded that an initiated IAA study can result in 3 outcomes:

- a Cosmic Study report
- it can be converted to a peer reviewed publication if it does not meet the Cosmic Study Standards, but good enough for a paper
- or can be closed down, if the progress is not sufficient

Study Group 4.9 Chair or representative: Menshikov/Murthi International Aerospace System for Monitoring of Global Geophysical Phenomena

There is no information on this study since 2010. They try to publish it at site (in Russia, but in any case Copyrights to be followed).

Study Group 4.11 Chair or representative: Gu Xingfa/Zhou Xiang Coordination and Cooperation for Global Environmental Impact

Final Report is submitted, and under approval by SAC.

Study Group 4.16 Chair or representative: Alkalai/Graziani/ Bousquet/Laufer The Applications of Micro-Satellites and Cube-Sats to Planetary Science and Exploration Missions

Alkalai is presented a status update in Jerusalem. We are expecting a First draft of Final report over the following days.

Study Group 4.17 Chair or representative: Cappelletti/Graziani/ Massimiani Space Systems for Biomedical Research

The study leads reported difficulties with getting feedback and contributions from the study participants. The study leads have decided to reformulate the study under a new membership and also coordinating with the Region Lazio entity in connection with a potential grant. It is expected that the study will move forward under this new

arrangement. The SG is also looking for collaboration and input from Commission #5, and other Commissions.

**Study Group 4.18 Chair or representative: Cho/Graziani/Polansky
Definition and Requirements of Small Satellites Seeking Low-Cost and Fast-Delivery**

Status Report was uploaded to IAA 2 days before this meeting.
Draft report has been distributed to study members for comments and feedback.

**Study Group 4.19 Chair or representative: Horikawa/Coradini
Promoting Global Space Knowledge & Expertise in Developing Countries**

The work is going on well. Chair was changed. There is a suggestion to include in the SG a member from our Commission 4 (Dr. Mugellesi Roberta). Roberta is asked to send information to Mikhail Ovchinnikov, who will officially propose Roberta to be included in the SG.

**Study Group 4.20 Chair or representative: Bao Weimin/Contant
Space Information Application in Earthquake Emergency Response**

They worked on the study since 2015. The report was uploaded to IAA. There is a suggestion to include Dr. Mugellesi Roberta in the study group. Roberta is asked to send information to Mikhail Ovchinnikov, who will officially propose Roberta to be included in the SG.

**Study Group 4.21 Chair or representative: Belokonov/Schilling
Distributed, Networked, Smart, Cooperating Small Satellite Formations**

The study began in October 2015. Report was uploaded to IAA. It is expected that a completed SG team membership will be provided by the IAC meeting.

4.2 New Studies Proposals

Our commission discussed potential new studies and identified two topics, which will be formulated into study proposals over the next months and finalized by the IAC meeting. These are:

1. Knowledge management and Integrate Application (Big Data) – Potential Chair is Mugellesi Roberta (ESA)
2. Implementation and Reliability Issues of Space Debris countermeasures of Small satellites Potential Chairs are Alex Da Silva and Rei Kawashima.

These suggestions are to be considered and could be approved as new SG.

5. IAA Conferences

5.1 *Current IAA Conferences*

5.1.1 Conferences (been held and are on track):

28 February-03 March 2016, 2nd IAA Latin America Cubesat Workshop, Florianopolis, Brazil

Program Committee Chair or representative: C. Capelletti/ M. Ovchinnikov
The Workshop was conducted well.

11th IAA Symposium on Small Satellite for Earth Observation, Berlin, Germany
Program Committee Chair or representative: R. Sandau. To be held on 24th – 29th, April, 2017

4th IAA Cubesat Winter Workshop in Europe 2017

Date, Place: TBD

Program Committee Chair or representative: TBD

3rd IAA Space Flight Safety Symposium, Saint-Petersburg, Russia December 2016

Program Committee Chair or representative: TBD

5th IAA Conference on Space Systems as Critical Infrastructures

Mamaia, Romania 2015

Program Committee Chair or representative: M-I. Piso

9th Pico and Nano Satellite workshop ???

Date, Place: TBD

Program Committee Chair or representative: TBD

4th IAA-RACTs Conference Scientific and Technological Experiments on Automatic Space Vehicles and Small Satellites

Samara, Russia: Date: 2017

Program Committee Chair or representative: Igor Belokonov

5.1.2 IAA Symposia at IAC

49th IAA symposium on safety, quality and knowledge management in space activities, Guadalajara, Mexico (IAC D5)

Program Committee Chairs or representatives: J. Holmes/ R. Mugellesi-Dow

20th IAA symposium on small satellite mission, Guadalajara, Mexico (IAC B4)

Program Committee Chairs or representatives: A. Da Silva Curiel/ R. Hornstein

18th UN/IAA workshop on small satellite at the service of developing countries,
Guadalajara, Mexico (IAC B4.1)
Program Committee Chairs or representatives: S. Mostert/W. Balogh

5.2 *New Conferences proposals*

3rd IAA DyCoSS, 2017. There are two hosting proposals - Moscow and China

The proposal to hold Conference for Small Satellites, 2017, in China is still expected and to be approved by the Permanent Committee on Small Satellites

6. Report from the IAA Permanent Committees

IAA Permanent Committee on Small Satellites
Chair: R. Hornstein, Co-Chair: Laufer Rene, R. Sandau
Secretary: D'Errico M,

For the IAC Small Satellites Symposium 150 abstracts have been received for the 9 Sessions. Instead of two half-sessions (4.7.a and 4.7.b), at the upcoming 23rd Symposium at IAC these two half-sessions will be replaced with a new session, entitled "4.7 Highly Integrated Distributed Systems".

There is a suggestion to consider the possibility to arrange a joint session with the Astrodynamics Committee of the IAF.

7. IAA Heads of Space Agencies Summit

This will be held in the spring of 2017.

8. Other Business

M.Ovchinnikov suggested members of the Committee and their colleagues to participate in a Conference to be held in Korolev City, Russia devoted to manned missions at present and in a future. (Also see Section 2 for more information on this.)

9. Adjourn