

# International Academy of Astronautics

## Commission V Report on Meeting

Guadalajara, Mexico

24 September 2016

### Attendance:

Elisabeth Back-Impallomeni (Chair), Bernhard Schmidt-Tedd (Co-Chair), Isabelle Duvaux-Bechon (Secretary), Corinne Jorgenson (Past Chair), Gabriella Arrigo, Christophe Bonnal, Marc Haese, Michael Hawes, Sylvia Ospina, Nicolas Peter, Ruihong Yang, Zhenjun Zhang.

#### 1. WELCOME

The Commission Chair, Elisabeth Back-Impallomeni, welcomed the participants.

#### 2. ADOPTION OF THE AGENDA

The agenda was adopted with some modifications, the final version is on the IAA web site.

#### 3. ADOPTION OF THE MINUTES OF COMMISSION 5, PARIS MARCH 2016 MEETING

The minutes of the Paris March 2016 meeting were adopted.

#### 4. IAA COSMIC STUDIES

##### 4.1 CURRENT STUDIES

##### 4.1.1 Study Group 5.10 - Orbital Debris Removal: Policy, Legal, Political and Economic

###### Considerations

Bernhard Schmidt-Tedd presented the status of the study. The first draft is nearly complete and it should be available for external review by IAA in March 2017

##### 4.1.2 Study Group 5.11 - Global assessment of regional cooperation in space: policies, governance & legal tools

Sylvia Ospina presented the status of the study. It has now got the final approval and is going to be printed. She thanked all contributors.

##### 4.1.3 Study Group 5.12 - Dynamics of Space Exploration Strategies and Future Outlook

Nicolas Peter presented the status of the study, asking for apologies for the absence of Serge Plattard and Pascale Ehrenfreund. He indicated that, given the regular updates on exploration strategies, they would make sure recent developments would be embedded. Integration of new developments will be stopped after ISEF2.

Asking if there were guidelines as to addressing the sources, Christophe Bonnal answered it was at the discretion of the authors, only making sure it was consistent over the report.

#### **4.1.4 Study Group 5.13 - Space Systems as Critical Infrastructure**

No representative of the study was present. Draft report was received by IAA.

#### **4.1.5 Study Group 5.14 - Situation Report on Space Debris**

Christophe Bonnal presented the status of the study. It should be seen as the reference status on space debris for the general public. The final draft was completed and reviewed on that same day and will be delivered to IAA for peer review. It has already been peer-reviewed within IAA SDC. It will be a living document that will be reviewed every two years. Some contributions are missing from China, India and Pakistan.

It will be freely downloadable from the IAA web site and CNES will provide paper copies that can be sold by IAA.

#### **4.1.6 Study Group 5.15 - Space Traffic Management – Towards a Roadmap for Implementation**

Corinne Jorgenson presented the status of the study. It is a review of academic research on the subject plus further activities and initiatives, including diplomatic ones. The final draft is available and will be circulated to the Commission for approval. It will be presented at the Academy Day on Sunday.

#### **4.1.7 Study Group 5.16 - International Legal and Policy Regimes for Space Natural Resources Exploitation and Utilization (SREU)**

Bernhard Schmidt-Tedd summarized the status of the study with the team under formation. Corinne Jorgenson asked whether there were regions that needed to be represented. This will be investigated.

## **4.2 NEW STUDIES PROPOSALS**

Ideas are welcomed, in particular from those not present at the meeting. Corinne Jorgenson suggested the members have a look at all past studies of the Commission, in order to identify those for which major changes occurred, or with a need for follow-on, or when conclusions include actions suggesting more research.

Two potential studies have been identified at the March 2016 meeting in view of the preparation of the 2018 Unispace+50 conference:

- Security issues of space activities (lead: Serge Plattard)

- Organizational aspects of space activities (lead: Liu Jizhong)

All to find contributors for those studies, or accept proposal made to them to take part. Progress to be reported at the March meeting for decision to submit the studies.

## 5. IAA CONFERENCES

### 5.1 CURRENT IAA CONFERENCES

#### 5.1.1 5<sup>th</sup> IAA Conference on Space Systems as Critical Infrastructure 9-10 August 2016, Mamaia, Romania

Nobody was present to report on it.

#### 5.1.2 IAA Symposia at IAC

29th IAA symposium on space policy regulation and economics,  
Guadalajara, Mexico (IAC E3)

Bernhard Schmidt-Tedd reported that there was a good number of speakers and that a proposal will be made for next year on the same lines. There is a new session 6 on “Enterprise risk management” chaired by Maria-Gabriella Sarah (ESA) and Ruediger Suess (DLR).

14th IAA symposium on space debris, Guadalajara, Mexico (IAC A6)  
Christophe Bonnal presented the status of the symposium with 9 sessions, 85% confirmation and 8 to 11 papers per session. There is a joint session (A6.8) with the Space Security Committee with Serge Plattard (ESPI) and Alexander Soucek (ESA). A Plenary session (PE 7) on “Projection and Stability of the Orbital Debris Environment in the Light of Planned Mega-Constellation Deployments” will be held on Thursday.

18th UN/IAA workshop on small satellite at the service of developing countries, Guadalajara, Mexico (IAC B4.1)

Nobody was available to present. The report of the WS has been received after the meeting. 16 papers were selected, 4 withdrawn and 1 no-show.

31th IAA/IISL scientific legal round table, Guadalajara, Mexico (IAC E7.6)  
Marc Haese presented the status of preparation of the round table to be held on the Thursday on future regional cooperation. It is an inter-disciplinary session chaired by Marco Ferrazzani (legal side) and Barbara Ryan (technical side) and with five speakers.

### 5.2 NEW CONFERENCES PROPOSALS

IAA-IISL Space Law and Policy Symposium  
Date, Place: TBD

To be discussed. Corinne Jorgenson will report to IISL.

## **6. REPORT FROM THE IAA PERMANENT COMMITTEES**

### **6.1 IAA PERMANENT COMMITTEE ON SPACE DEBRIS**

Christophe Bonnal presented the work of the Committee.

### **6.2 IAA/IISL SCIENTIFIC LEGAL LIAISON PERMANENT COMMITTEE**

Marc Haese reported that a meeting of the permanent committee was held to prepare the round table of 2017 on the theme: Technological and Legal challenges for on-orbit servicing with two chairs: Tomaso Sgobba and Richard Crowther.

## **7. IAA HEADS OF SPACE AGENCIES SUMMIT**

Corinne Jorgenson recalled the past meeting, in 2010 and 2014 on Space Exploration. The last summit was held in September 2015 in Mexico on Climate Change and Disaster Management, led by Francisco Mendieta, Head of AEM and Jean-Yves le Gall, President of CNES and president-elect of IAF, and it was very successful. Dr Mendieta will report on it at the IAA day.

The possibility to hold a Head of Agencies meeting on Space Exploration in 2018 will be discussed in a few months.

## **8. OTHER BUSINESS**

A plenary Commissions meeting was held earlier on that same day, that discussed some suggestions to improve the functioning of the Commissions:

- Improve the pro-activeness of a Commission, have active participants
- Do not restrict anymore the number of members of a Commission (10 today)
- Avoid that nothing happens between the Spring and IAC meetings, with as well many of the members of a Commission that cannot attend at least one of the two meetings, thus install former teleconferences in between to have members participating, e.g. in the timeframe December-January and May-June

This was approved by the participating Commission's members.