

International Academy of Astronautics

6, rue Galilée, 75116 Paris

<http://www.iaaspace.org>

Commission 1 Space Physical Sciences

Minutes of Meeting

**22 March 2022 – 17h00-19h00 CET
Online (BlueJeans virtual meeting)**

Attendance: Contant Jean-Michel, Court Andrew, Coustenis Athena, Cozmuta Ioana, Dennemont Fabrice, Fu Rao, Gruntman Mike, Gurvits Leonid, Liebermann Randy, Lopes Rosaly (Chair), Maccone Claudio, McNutt, Jr. Ralph, Medina Tanco Gustavo Adolfo, Ramachandran Radhika, Schwehm Gerhard, Ulamec Stephan, Varotsos Costas, Xue Yong, Yano Hajime (Secretary), Zelenyi Lev.

Excused: Susan McKenna-Lawlor

1. **Welcome** Commission Chair

- Lopes welcomed the participants.

2. **Adoption of the Agenda** Commission Chair

- The agenda was unanimously adopted.

3. **Adoption of the Minutes of the last Commission 1 meeting**

- Lopes briefly presented the minutes of the last online meeting on October 11 in 2021. The minutes were unanimously adopted.

4. **IAA Cosmic Studies**

4.1 **Current Studies**

- SG 1.9 Satellite remote sensing of aerosols in the Earth atmosphere

(Chairs: Yatskiv/Milnevsky)

- After the last meeting, the Commission requested to present the report and to close this study group but the action had been still on hold.

- SG 1.13 Small Satellites for Extremely Low Cost Planetary Mission

(Chairs: Baker/Vane/Bousquet)

- Ralph McNutt had received the report for the study review. After the SAC & BOT approval, a normal publication process is expected.

- SG 1.14 Integrated Precursor Distinguish in Multi-Geophysical Fields around Global Earthquake Events with a Magnitude larger than 7 in Recent 10 Years

(Chairs: Bao Weimin/Contant/Kuznetsov/Zhang)

- Rao F. presented the status report prepared by Xueming Zhang.
- The English version is planned to be published in June 2022.
- This report is based on a hypothesis. The Chinese report should be delivered to IAA secretary first and then the translated version to follow for peer review. In fact, the final report should go to Comm-1 members first for peer review before sending to the IAA secretary.

- SG 1.15 International Cooperation on Space Weather

(Chair: McKenna-Lawlor Susan)

- Schwehm contacted with McKenna-Lawlor and reported to the Commission that it was clear that she could not complete the study. This action has been terminated.
- Her contact address will be shared among the Comm-1 members who want to write to her because email access may not be possible.

4.2 New Studies Proposals

All

- Discussion on New Study Group Ideas

- Legal implication of commercial space exploration with Commission-5. We must watch the movements of FAA as a regulatory agency in USA at IAC meeting in Paris next week.

5. IAA Conferences

5.1 Current IAA Conferences

5.1.1 IAA Search for Life Signatures

- Program Committee Chair or representative: Claudio Maccone resigned from the chair and Michael Garrett was appointed as the new chair.

- They will meet at IAC meeting in Paris for selecting the papers. The 2023 may be a good opportunity for a next SETI conference.

5.1.2. IAA Symposium on the Future of Space Exploration

- Program Committee Chair or representative: Giancarlo Genta
- It is planned to be held next year, by face-to-face in Italy.

5.1.3. IAA Space Flight Safety Symposium (SFS)

- Program Committee Chair or representative: Nickolay Smirnov
- Many conference series previously planned in Russia and Ukraine have been postponed at the moment.

5.1.4 IAA Symposium on the Search for extraterrestrial intelligence (SETI) at IAC

- Program Committee Chair or representative: Claudio Maccone
- Received 28 abstracts about SETI including lunar farside radio telescopes

5.2 New Conferences proposals

All

- No new proposals are presented.

6. Report from the IAA Permanent Committees

6.1 IAA Permanent Committee on the Search for Extraterrestrial Intelligence (SETI)

- Maccone introduced new officers. Chair: Michael Garrett, Co-Chairs: Andrew Siemion and Carol Oliver, Secretary: Lori Walton

6.2 IAA Permanent Committee on Moon Farside Protection

- Chair: Claudio Maccone
- Protection of lunar farside free from radio noise is an urgent issue after Chang'e-4 farside mission and EML2 relay satellite are realized.

7. Other Business

All

7.1 The report on the 14th IAA Low-Cost Planetary Mission Conference:

Dates: February 28- March 3, 2022

Venue: Full online (due to COVID-19, originally planned in Beppu, Oita, Japan)

Joint Host: the 33rd ISTS

Chairs: H. Yano (JAXA/ISAS), P. Bosquet (CNES), D. Baker (JPL)

Sessions: 8

Participants: ~80

- The conference hosted talks on interplanetary low-cost missions such as Janus and DESTINY+, a range of lunar surface missions, new enabling technology, miniaturized science instruments, etc. The conference enjoyed interactive and in-depth discussions

between the participants and the panelists from Europe, U.S., China, and Japan.

- It has become clear that the LCPM concept has evolved and diversified in the last three decades. The LCPM concept has evolved and diversified from the “Faster, Better, Cheaper” (FBC) mission concepts in 1990's to interplanetary probes and cubesats in 2020's. Stakeholders in the LCPM environment have expanded to emerging nations, new space/private sectors, and universities. Thus, IAA will also benefit well by continuing the LCPM series in the future.
- It is noted that the core value of IAA as an independent, non-governmental organization for the benefit of all humanity through excellence in astronautics has become more important than ever in the current global crisis. The next LCPM is currently considered to be held in Pasadena, California, AFTER the global pandemic is ceased, possibly in 2024.

7.2 Other comments

- Fabrice mentioned that IAA President prepared a statement and the Commission-1 should participate to give comments. BOT meeting will be held next week.
- Lopes closed the meeting by thanking the great attendance and active discussion. It was mentioned again that the hybrid-style Commission meeting with online participation should be continued in the future.
- The next Commission meeting will be held in September, both online and onsite in conjunction with IAC.

Rosaly Lopes
Chair

Hajime Yano
Secretary

(End of notes)