

**IAA Commission 1 'Space Physical Sciences' Meeting,  
Sunday 21 September, 2013 from 14.00 - 17:00 p.m.,  
China National Convention Centre, Beijing, China**

**Minutes of the Meeting**

**Meeting Attendance:** J. N. Goswami (Chair); Susan McKenna-Lawlor (Secretary), Claudio Maccone, Bernard Zappoli, Robert Farquhar\*, David Dunham\*

\* Invited Participant

**Agenda**

1. Welcome (J. N. Goswami)
2. Self-introduction of Commission 1 members, and invited participants (All)
3. Minutes of the Commission I Spring Meeting in Paris, March 2013 (N. Smirnov)
4. Study report status (J. N. Goswami)
5. Report on LCPM10 (G.Vane)
6. Plan for LCPM11 (G. Vane)
7. Special issue of Acta Astronautica (G. Vane)
8. New Proposals (from the floor)
9. Other business (from the floor).

**Item 1**

The Chairman (Acad. J. N. Goswami) opened the meeting and welcomed those present. (R. Farquhar and D. Dunham were introduced as invited participants).

**Item 2**

Self-introduction of Commission 1 members and the invited participants.

**Item 3**

The Minutes of the Paris Spring Meeting in March 2013 were circulated and adopted without alteration.

**Item 4**

The status of various study reports under the aegis of Commission 1 were reviewed

SG 1.10, SG 1.11 and SG1.12 have been approved by the IAA

The team of SG 1.14 has not followed through on an earlier recommendation of Commission 1 that its membership be expanded. There are still only two names on the proposal. Commission 1 provisionally approves this proposal subject to the expansion of the study team.

SG 1.13 was successfully merged with Commission 4 Study 4.16:

Four further studies are in various stages of advancement.

### **Item 5**

The 10<sup>th</sup> biannual IAA topical conference on Low-Cost Planetary Missions, LCPM10, was held in Pasadena, California on 18-20 June 2013, on the campus of the California Institute of Technology. In spite of conflicts with other conferences and travel budget restrictions in the countries of many of the participants, the attendance was close to an all-time high. 110 scientists, engineers, program directors and others attended the conference. Sessions dedicated to two new topics were included in the agenda of LCPM10: (1) Cube-Sats and Small-Sats - A New Paradigm for Conducting Planetary Exploration; and (2) The Robotic/Human Exploration Link – A Panel Discussion. Both topics generated great interest and should be included in future LCPMs. Virtually all oral and poster presentations are posted at the LCPM10 website located at: <http://www.lcpm10.caltech.edu/index.html>

### **Item 6**

During the LCPM10 Organizing Committee meeting in Pasadena, it was agreed that the next LCPM will be hosted by the DLR in Berlin, Germany, in June 2015. Tilman Spohn offered to be the Organizing Chairman and Gregg Vane will be Co-Chairman. An agreement was subsequently reached with the leadership of the International Planetary Probe Workshop (IPPW) to de-conflict the meeting dates of these two conferences in order to improve attendance at both. The IPPW leadership is firming up their plans to hold the 2015 IPPW meeting at DLR in Koln, German, the week preceding LCPM11.

### **Item 7**

With the concurrence of the LCPM10 organizing committee, LCPM10 chairman Gregg Vane proposed to Acta Space Physical Sciences editor Nickolay Smirnov a special issue of Acta Astronautica, comprised of some two dozen papers from the LCPM10 conference. Dr. Smirnov submitted a formal recommendation for such an issue to the Editor in Chief and full Editorial Board for consideration at the Editorial Board meeting in Beijing in the coming days.

### **Item 8**

There were no formal proposals for new studies from the floor, but R. Farquhar expressed his interest in developing the topic of “Missions to Kuiper Belt Objects”.

### **Item 9**

C. Maccone reported on an ongoing Academy Study “Protected antipode circle of Lunar Far Side” which he leads. This study has identified a circle 1,820 km in diameter at the centre of the lunar far-side which it is perceived should be reserved for scientific radio research and protected, along with the radio-quiet-cone that dominates it, from human radio interference.

It was pointed out by S. McKenna-Lawlor that spacecraft related radio interference is already present at the site and this can potentially be enhanced due to radio emissions from future spacecraft located at the Sun-Earth and Earth-Moon Lagrangian points. It was decided after discussion that two countries should be sounded out with regard to their potentially raising the issue at the UN of reserving the antipode circle for radio astronomy. Based on discussion that followed, two countries, Ireland (through S. McKenna-Lawlor) and Malaysia (through Mazlan Othman) have been provisionally identified and the concerned persons will be asked to get informal feedbacks.

(a) Mission Opportunity

R. Farquhar provided an account of a mission opportunity to encounter two comets in 2018.

The Chairman thanked all present for their valuable comments and suggestions and closed the meeting.

Susan M. P. McKenna-Lawlor,  
(Secretary of Commission-1)