

## Academy Day

### International Academy of Astronautics (IAA)

## Commission 4 Meeting Report

Cape Town, South Africa, Sunday October 2<sup>nd</sup> 2011

The meeting was run by

- Larry Paxton,
- Amnon Ginati, and
- Tibor Balint

The meeting is attended by 22 people; the list and the contact information is provided at the end of this report.

The IAA has published the Commission 4 membership for 2011-2013, as follows:

Chair: Alkali, L. (USA) (2005)

Vice-Chair: Graziani, F. (Italy) (2009)

Past-Chair: Ginati, A. (Germany) (2005)

Secretary: Balint, T. (Hungary) (2009)

Member: Laufer, R. (Germany) (2009)

Member: Mostert S. (S-Africa) (2009)

Member: Ovchinnikov, M. (Russia) (2009)

Member: Minhui, Z. (China) (2011)

Member: Makasuka, S. (Japan) (2011)

Member: Moshnienko, Y. (Ukraine) (2011)

Note: the extended membership is actively participating and contributing to the Commission's activities. These members regularly attend the commission meeting, as listed at the end of the meeting minutes.

### Meeting Agenda

Larry Paxton presented the meeting agenda:

- Welcome
- Study group Activities
- Berlin Small Satellite Meeting
- Study group on Africa in Space (organized by Amnon)
- Acta Astronautica status
- Plenary Day summary – Reiner to summarize it
- Any other business: Rei Kawashima from Japan is organizing a nano-satellite competition, and will give a short presentation.

## Welcome

- 22 people attended the Commission 4 meeting in Cape Town; list is provided at the end of the minutes
- It was agreed and accepted by the Commission members that Rhoda will be an acting co-chair for next 6 months.
- Minutes to be posted on the IAA website, once reviewed by the members

## Study Group Activities

### Jeanne Hole presented on Knowledge Management

- She will provide a presentation on the activities, to be posted on the IAA website
- The final paper will also be submitted and posted on the IAA website

### Zhu Minhui from China presented on SGEI

- Zhu will be providing his presentation for posting on the IAA site
- report delivered by end of this year
- data is available in China only, but can be requested from the outside, by sending application form to CMA (China Ocean Administration); website address needs to be provided;
- Approach: 1) develop data system first; not all data is shared; 2) extend the framework with more Chinese satellites to join and extend to international satellites;
- Q: was the hyperspectral satellite launched? If yes, is that data available?
- A: 2-3 years from now 7 satellites will be launched w/ high spectral instruments for disaster detection; and gas detection; Still under development; going to launch
- Q: are there discussions with IGMAS study group?
- A: yes; they are coordinating;
- Q: data sharing platform? Do they have a format that we could get and publish it in an anthology? (J.H.)
- A: yes,

### Rainer Sandau presented on the 8<sup>th</sup> IAA Small Satellite Symposium

- The 8<sup>th</sup> IAA Symposium on Small Satellites for Earth Observation was held in April 04 - 08, 2011 Berlin, Germany
- The main focus was on small satellite activities from around the world
- More than 200 participants;
- 55 papers 73 posters;
- Panel discussions about sustainable development in developing countries;
- Student competition; two study topics: (interoperability & )
- The symposium released a CD with the abstracts and papers,

- A book is in the works under IAA publishing, with a focus on “new mission concepts” and “technology challenges”; the book will also include the 14 best small satellite concepts from the competition held in Japan last year (further on this is provided by Rey Kawashima later in the meeting)

#### Hitchhiking to the Moon

- Rene and Jamie will be providing a presentation on the status, working with Leon. [*Additional comments:* Based on recommendations from Jean-Michel Contant, the study has included (merged) with the proposed study called “Hitchhiking to other planets” by Jacques Blamont.]

#### Program Committee update

- Rhoda provided an update on the IAC B.4 Small Satellite Missions Symposium;
- The Symposium meeting will be on Tuesday October 4, at noon, at the Seal/Robin room
- Every year B.4 is running a highly successful symposium on topics such as: Earth observation; space science; interoperability; design and tech; hitch to the moon
- B.4 has been #1 for 4 years!!, including this year (sharing the top spot)

#### Amnon Ginati presented on Space for Africa/ Africa for Space

- Started to organize it in Korea;
- Set of meeting with organizing committee;
- The meeting provides a bridge between IAF/IAA/United Nations
- Content prepared by Commission 4
- 3 days workshop; 1 sessions by C.4 on space and health; well attended;
- User driven small sat missions;
- ESA has many small sat missions; ~20M Euros were put into this; limited budget;
- The activity run on Friday and Saturday, addressing 3 topic areas (Larry participated);
- The closing session will be held in Auditorium 2, from 16.30-18.00 today
- Followed by a 30 minutes meeting from 18.00 to 18.30 on future plans to keep the activities going

#### Status on Acta Astronautica

- no representative was present, so this was not discussed

#### Science activities

- Next meeting in Paris, mid-March; coinciding with the IAF/IAC Spring meeting

- Followed by IAF/IAC Fall meetings in Naples; Beijing; (Tel Aviv? TBD), and other spring meetings in between in Paris
- Next November: IAA in Nairobi, Kenya on Remote Sensing on Sub-Sahara region (organized from Rome);
- 2 days laboratory to manage remote sensing
- Next January: cube sat winter session workshop in Bruxelles; John Mullert chair; then back to Rome in the future:
- Google groups – Jeanne Holm can help with making contact

#### Rei Kawashima presented on Small Satellites Ideas Contest

- First competition on small satellites was held last year in Japan, coordinated by Rei Kawashima
- 14 best concepts will be published in the IAA Small Satellites Symposium book (coordinated by R. Sandau)
- Q: what are the issues with small sat becoming debris? Anybody addressing it?
- A: deorbit is not yet addressed;
- Nick Johnson from NASA is in Cape Town; he could address orbital debris issues; NASA is adding cube sats to primary missions; several issues are not addressed about it.
- Rene: JSC's orbital debris office; or DRL is addressing the topic;
- Small sats must orbit within 25 years;
- More and more programs support a common approach; 19000 objects known at the cube sats size; small number of launches don't have significant addition to this (may not be a good argument);

#### Other Business

None

#### Closing

- Commission 4 held a productive meeting in Cape Town
- All activities are either close to completion or progressing according to plans
- The members were looking forward to the B.4 Symposium sessions
- Next meeting in Paris, in March 2012

#### Meeting Attendance:

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