



IAA COMMISSION 2 on Space Life Sciences
March 17, 2009, 08:30 – 11:00 a.m.
Location: Immeuble Aéroclub de France
6, Rue Galilee, 75016 Paris
Summary Minutes

Attendees (in alphabetical order):

Surname	First Name	Affiliation
Antunano	Melchor	FAA Civil Aerospace Med.Inst.
Baranov	Victor	Inst. General Pathology and Pathophysiology, Moscow
Boese	Andrea	DLR
Boles	Vincent	The Aerospace Corporation
Conley	Catherine A.	NASA HQ
Ehrenfreund	Pascale	SPI –GWU, DC
Graef	Peter	DLR
Gunga	Hanns Christian	Charité, Free University, Berlin
Horneck	Gerda	DLR
Kanas	Nick	University of California
Katuntsev	Vladimir	IBMP
Koch	Bernhard	DLR
Kozlovskaya	Inessa	IBMP
Kreuzberg	Karlheinz	ESA
O'Handley	Douglas A.	Santa Clara University
Reitz	Günther	DLR
Rummel	John D.	East Carolina University
Sundblad	Patrik	ESA
Zhuang	Fengyuang	Beijing Univ. of Aero- nautics and Astronautics

1. Welcome/Introduction

Welcoming the participants the Chair of Commission 2, P.Graef, briefly reported on activities since the last meeting in Paris and outlined the objectives for the present meeting. After attendee introductions the draft agenda (annex I) for the meeting was adopted.

2. Review of minutes of last Commission 2 meeting in Glasgow

Copies of the draft minutes from last Commission II meeting in Glasgow have been handed to participants for comments and agreed upon. The final version of these minutes has already been sent to participants and is also available on the IAA website (<http://www.iaaweb.org>).

3. Reports by the Chair: Scientific Activities, Board of Trustees, Membership of Commission 2, general news from IAA

N. Kanas and R. Gerzer reported on ongoing activities in the Board of Trustees (BOT). Regarding membership issues, specific groups shall be targeted for



membership, e.g. younger people, women, people from strategically relevant countries.

P. Graef reportet on the Scientific Activities Committee meeting in Glasgow and planned activities in Paris. An issue of concern is the overlapping of activities created by the recent creation of the new IAF technical and administrative committees. The respective SAC recommendations will soon be available at <http://www.iaaweb.org>

4. Study Group proposals/activities

4.1 General Overview

The Commission recommended keeping track of the ongoing study groups in order to finish the work successfully. Clarification should be reached regarding those studies still on hold. In case of no deliveries or exceeding the time-limit the Commission proposed to discuss on how to finish respective activities.

For the 60th IAC in Korea, meeting rooms are requested for study group activities. Pending on confirmation by the local organizers, rooms will be available for Study Group 2.8 and 2.9 on Tuesday, October 13, 13:00h-15:00h, and Study Group 2.5 on Wednesday, October 14, 9:00h-10:00h.

4.2 Status/Progress reports from Study Groups chairs

SG 2.2 Artificial Gravity as a Tool in Biology and Medicine (Young/Yajima)

The revised final report is available. The next steps will be the Scientific Activities Committee (SAC) and BOT approvals. After approval publication could be initiated via DLR.

SG 2.4 Psychology and Culture in Long Duration Space Missions (Kanas/Sandal)

Published; booklet and pdf are available

SG 2.5 Astrobiological Studies of Solar Systems (Rummel/Horneck)

As reported by John Rummel, activities are on hold since September 2008.

SG 2.6 Medical Safety Guidelines for Passengers on Commercial Orbital Space Flights (Antunano/Gerzer)

Published; booklet and pdf are available

SG 2.7 Integrative Physiology in Long-duration Space Flight: Nutritional Aspects (Heer/Smith)

As reportet by M.Heer a first draft report is expected to be available by the end of 2009..

SG 2.8 e-Learning in Space Life Sciences (Kourtidou-Papadeli/Horneck)

Proposal has been received in September 2008. and approved by SAC.

Final membership list with addresses and email is urgently requested in view of IAA formal appointments.

Status report and presentation are available at <http://iaaweb.org/content/view/309/450/>

4.3 Discussion on new proposals

SG 2.9 International Standards for Bed Rest Studies (Sundblad/Orlov)

The proposal for this study group was presented by P. Sundblad. The overall goal of the study is to define and agree internationally on standard conditions and basic standard measurements for space flight related bed rest studies.



The proposal was unanimously approved by commission 2. A respective recommendation will be made to SAC.

Final membership list with addresses and email is urgently requested in view of IAA formal appointments.

5. Programme preparation activities

5.1 Status for the 17th Human in Space Symposium

O. Orlov presented a detailed update on the IAA HIS Symposium, June 7-11, 2009 in Moscow.

The organizing committee of the symposium has received more than 270 abstracts for oral and poster presentations from scientists of 24 countries.

The Program Committee evaluates all received abstracts with respect to their scientific importance and compliance with subjects of the Symposium.

The Scientific Program of the Symposium is under development. It will include scientific sessions (the program for 18 sessions under various directions of space life sciences has been already prepared), 7 key lectures and panels of cosmonauts..

5.2 Status of preparation for 60th IAC in Korea

The Space Life Sciences Symposium A1 will comprise eight refocused sessions. A new session on public outreach and education aspects is incorporated into the Symposium. 94 abstracts have been received which are distributed to the sessions as follows::

- A1 Space Life Sciences Symposium (94)
- A1.1 Behaviour, Performance and Psychosocial Issues in Space (17)
- A1.2 Human Health: Countermeasures (15)
- A1.3 Applications of Space Medicine to Earth-related Health Issues (5)
- A1.4 Radiation Effects and Risks in Human Space Missions (13)
- A1.5 Astrobiology (7)
- A1.6 Environmental Control, Life Support and EVA Systems (14)
- A1.7 Fundamental Gravitational Biology (10)
- A1.8 Public Education and Outreach – Integral Elements of Space Life Sciences Program Development (13)

5.3 Status of preparation for the 61st IAC in Prague

The Space Life Sciences Symposium A1 will comprise eight slightly refocused sessions.

A1. Space Life Sciences Symposium

The symposium jointly organized by the International Academy of Astronautics and the International Astronautical Federation will address all aspects of space life sciences research and practice in human and robotic spaceflight, from Low Earth Orbit (LEO) to the universe beyond, and from the Big Bang to the lives of future explorers on other planets of our solar system.

A1.1 Behaviour, Performance and Psychosocial Issues in Space

This session considers psychosocial, interpersonal, cultural, cognitive, circadian/sleep and human factors issues and countermeasures related to human spaceflight and space exploration.

A1.2 Human Physiology in Space



This session focuses on all aspects of spaceflight physiology that relate to human health and to the countermeasures employed to maintain health and performance

A1.3 Medical Care for Humans in Space

The session focuses on medical care for astronauts including operational medicine aspects, countermeasure development and applications as well as needs for future care for astronauts during long term stays in space and missions to and on Moon and Mars. A further focus will lie on medical care for passengers and operators of commercial suborbital and orbital space flights.

A1.4 Radiation Fields, Effects and Risks in Human Space Missions

The major topics of this session are the characterisation of the radiation environment by theoretical modelling and experimental data, radiation effects on physical and biological systems, countermeasures to radiation and radiation risk assessment

A 1.5 Astrobiology and Exploration

A new era of space exploration will soon expand into a global endeavour to achieve highly ambitious goals such as establishing human bases on the Moon, journeys to Mars and the construction of new infrastructures in space. Astrobiology plays a key role in the strategic search for organic compounds and life on Mars and other planetary objects in our solar system and can provide support in the preparation of human exploration endeavours. The session invites papers of astrobiological content supporting future robotic and human exploration missions.

A1.6 Life Support and EVA Systems

This session will address strategies, solutions and technologies in providing for human requirements during future deep space and planetary/lunar surface exploration

A1.7 Biology in Space

This session focuses on the molecular and cellular systems in plants and animals to analyse the mechanisms of gravisensitivity in ground-based and space flight experiments

A1.8 Public Outreach and Education in Space Life Sciences

This session focuses on all aspects of public outreach and education activities related to space life sciences: strategies, best practice examples, future concepts and the integration into the space life sciences program development process.

5.4 Status of preparation for the 62nd IAC in Cape Town

Proposals for the 62nd IAC Space Life Sciences Symposium are welcome.

The proposal should be finalized at the Spring 2010 Paris meeting.

6. Next meeting and work between meetings

Next meeting of IAA Commission 2 will take place in conjunction with the IAC in Daejeon on Sunday, October 11, 08:30h-12:00h, Room tbd.

7. Any other Business

None

Andrea Boese



annex 1

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Draft Agenda

1. Welcome/ Introduction
2. Review of minutes from last Commission 2 meeting in Glasgow
3. Reports by the Chair: Scientific Activities, Board of Trustees, Membership of Commission 2, general news from IAA
4. Study Group proposals/activities
 - General overview
 - Status/Progress report from Study Groups chairs
 - SG 2.2 Artificial Gravity as a Tool in Biology and Medicine (Young/Kazuyoshi/Paloski)
 - SG 2.4 Psychology and Culture in Long Duration Space Missions (Kanas/Sandal/Boyd)
 - SG 2.5 Astrobiological Studies of Solar Systems (Rummel/Horneck/Kminek)
 - SG 2.6 Medical Safety Guidelines for Passengers on Commercial Orbital Space flights (Antunano/Gerzer/Russomano)
 - SG 2.7 Integrative Physiology in Long-duration Space Flight: Nutritional Aspects (Heer/Smith/Baecker)
 - SG 2.8 e-Learning in Space Life Sciences (Kourtidou-Papadeli/Horneck/Bamidis)
 - Discussion on new proposals (tbc)
5. Programme preparation activities
 - Status for the 17th Human in Space Symposium in Moscow
 - Status of preparation for 60th IAC in Korea
 - Paper selection procedure
 - Status of preparation for 61st IAC in Prague
 - Session proposals for Prague
 - Plenary proposal for Prague
 - Status of preparation for the 62nd IAC in Cape Town
 - Discussion on new proposals (tbc)
6. Next meeting and work between meetings
7. Any other business