



## IAA COMMISSION 2 on Space Life Sciences

Coordination Meeting  
Academy Day, 59<sup>th</sup> IAC

September 28, 2008 08:30 – 11:00 a.m.  
Location : SECC Congress Centre, Glasgow  
Room Alsh 2

### Summary Minutes (draft)

Attendees (in alphabetical order):

<b>Surname</b>	<b>First Name</b>
Antunano	Melchor
Baranov	Victor
Boese	Andrea
Boles	Vincent
Conley	Catherine A.
Ehrenfreund	Pascale
Graef	Peter
Gunga	Hanns Christian
Horneck	Gerda
Kanas	Nick
Katuntsev	Vladimir
Koch	Bernhard
Kozlovskaya	Inessa
Kreuzberg	Karlheinz
O'Handley	Douglas A.
Reitz	Günther
Rummel	John D.
Sundblad	Patrik
Zhuang	Fengyuang

Commission 2 members and participants of the meeting will receive information concerning Email addresses and affiliation separately.

#### 1. Welcome/Introduction

Welcoming the participants the Chair of Commission 2, J. D. Rummel, 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 Paris

Due to problems with his luggage Commission 2 Secretary K. Kreuzberg was not able to provide the draft minutes from the last Commission 2 meeting in Paris, March 26, 2008. The draft minutes will be e-mailed to Commission members and participants of the Paris meeting as soon as possible for comments and approval. The final version will be distributed among the respective persons and will be made available on the IAA website: <http://iaaweb.org/content/view/11/55/>



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

N. Kanas 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.

### **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.

#### **4.2 Status/Progress reports from Study Groups chairs**

##### S 2.1 Mathematical Modelling & Physiological Simulation: The Digital Astronaut/Cosmonaut (White/Gerzer)

R. White and R. Gerzer could both not join the meeting due to conflict of dates. A status report on the progress of the work is expected for the upcoming meetings.

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

A status report on the progress of the work was not available and is expected for the upcoming meetings.

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

N. Kanas confirmed that the review has been finalized and the final report has been approved by the BOT. He informed the participants that there had been some discussions on the way of publishing the report.

Finally, a stand alone publication sponsored by DLR is in preparation. A short version of the final report has been accepted for publication by Acta Astronautica.

V. Boles proposed to discuss the publication policy regarding different versions of final reports in the BOT. G. Horneck proposed that publications in Acta should reference to other versions of the respective report published e.g. as booklets or books.

##### S 2.5 Astrobiological Studies of Solar Systems (Rummel/Horneck)

A status report on the progress of the work was not available and is expected for the upcoming meetings.

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

M. Antunano presented an update on the report which was developed in a collaborative action with Prof. S. Hobe regarding law aspects. The final report is now available and the next steps will be the Scientific Activities Committee (SAC) and BOT approvals. M. Antunano expressed his hope for a recommendation for publication. The report should be published by the IAA as an Academy-sponsored document.

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

A status report on the progress of the work was not available and is expected for the upcoming meetings.



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

G. Horneck presented the proposal for the study group (Annex II). The proposal was approved by Commission 2. Some possible overlaps with Commission 6 were identified. Discussions with Commission 6 on potential joint activities have been started. Approval by the SAC is pending.

### **5. Discussion on new proposals**

No other proposals on new IAA Study Groups were made.

### **6. Programme preparation activities**

#### **6.1 General – update ongoing 59<sup>th</sup> IAC Glasgow**

The Commission stated that a good program has been compiled for Glasgow. 72 papers and 18 interactive presentations will be presented in the seven sessions of the Space Life Sciences Symposium A1. Session A1.7 will be a joint session with A2.7 on Physical Sciences and Life Sciences for Space Exploration.

#### **6.2 Status of preparation for 60<sup>th</sup> IAC in Korea**

The Space Life Sciences Symposium A1 will comprise eight refocused sessions. The joint session A1.7-A2.7. will not be continued. A new session on public outreach and education aspects is incorporated into the Symposium which is scheduled as follows:

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

J.D. Rummel emphasized the need to encourage people to submit abstracts. Paper selection will be done during the Spring Meeting 2009.

#### **6.3 Status for the 17<sup>th</sup> Human in Space Symposium**

V. Baranov presented a detailed update on the IAA HIS Symposium, June 7-11, 2009 in Moscow (Annex III, separate file). The status of preparation is nominal and the deadline for abstract submission is January 23, 2009.

Letters of invitation will be sent out in time. Participants of the HIS Symposium will attend to their visa.

#### **6.4 Status of preparation for the 61<sup>th</sup> IAC in Prague**

A status report is expected for the upcoming meetings.

### **7. Next meeting and work between meetings**

Next meeting of IAA Commission 2 will take place in conjunction with the IAF Spring Meetings, March 16-18, 2009, tbc.



## **8. Any other Business**

J.D. Rummel proposed that the Life Sciences Award should be named "Oleg Gazenko Award". The attendees agreed. N. Kanas will put forward this proposal for approval by the BOT.

During the meeting K. Kreuzberg informed the participants that he asked A. Boese to take over the position of Secretary of Commission 2. She accepted the nomination. At the end of the meeting J.D. Rummel informed the participants that he is leaving NASA HQ and proposed to pass the chair of Commission 2 to P. Graef. He accepted the nomination and pointed out the team approach for the future shaping of the Commission's work.

The official proposal to appoint P. Graef Chair and A. Boese Secretary of the Commission 2 on Space Life Sciences will be submitted to Dr. Nair to be processed in the appropriate way.

Andrea Boese



## **Annex I**

IAA COMMISSION 2 - Space Life Sciences

Coordination Meeting

September 28, 2008 08:30 – 11:00

Location : SECC Congress Centre, Glasgow

Room Alsh 2

Draft Agenda

1. Welcome/ Introduction
2. Review of minutes from last Commission 2 meeting in Paris
3. Reports by the Chair: Scientific Activities, Board of Trustees,  
Membership of Commission 2, general news from IAA
4. Study Group proposals/activities
  - 4.1. General overview
  - 4.2. Status/Progress report from Study Groups chairs
5. Discussion on new proposals (tbc)
6. Programme preparation activities
  - 6.1. General – update ongoing 59th IAC Glasgow
  - 6.2. Status of preparation for 60th IAC in Korea
  - 6.3. Status for the 17th Human in Space Symposium (Presentation by V. Baranov)
  - 6.4. Status of preparation for the 61th IAC in Prague
7. Next meeting and work between meetings
8. Any other business



## Annex II

### Proposal for Forming an IAA Study Group

**Title of Study: e-learning in Space Life Sciences**

**Proposer(s): Chrysoula Kourtidou-Papadeli, Panagiotis Bamidis**

**Primary IAA Commission Preference: commission 2**

*(From Commission 1 to Commission 6)*

**Secondary IAA Commission Interests: 1,3,4,5,6**

*(From Commission 1 to Commission 6)*

### Members of Study Team

**Chairs:**

**Chrysoula Kourtidou-Papadeli (Greece),  
Gerda Horneck (Germany)**

**Secretary:**

**Panagiotis Bamidis (Greece)**

**Other Members (by alphabetical order):**

**Melchor.J.Antunano (USA)  
Andrea Boese (Germany)  
Vincent Boles (USA)  
Ludmila Buravkova (Russia)  
Jean-Michel Contant (France)  
Mary Anne Frey (USA)  
Claudie Haignere (France)  
Joan Vernikos (USA)  
Nick Kanas (USA)  
Antonios Kyparos (Greece)  
Chiaki Mukai (Japan)  
Christos Papadelis (Greece)  
Thais Russomano (Brazil)  
Nikolaos Spyrou (Greece)  
Fengyuan Zhuang (China)**



### **Short Description of Scope of Study**

The aims and objectives of the study group are linked with the expansion of educational activities related to a variety of scientific areas within space medicine (and science).

#### **Overall Goal:**

- To promote cross-disciplinary collaboration in space medicine
- To report on (electronic) educational activities occurring around the globe in this scientific area
- To facilitate the utilization of contemporary platforms/environments for e-learning deployment
- To spread experiences related to conformance with educational standards
- To facilitate the e-exchange of educational digital material among educators
- To experiment with the implementation of digital copyright

#### **Intermediate Goals:**

- To conduct a survey on current use of educational digital material within associated Institutions and IAA members
- To collect all the above information in a common/shared educational environment
- To split into various thematic areas and build cross-linkages/connections
- To enable the uploading of material in the various thematic areas
- To enable the registration of interested parties (e.g. other educators, students)
- To standardize the educational material with the use of educational standards (like SCORM, HealthCare LOM)
- To experiment with the implementation of digital copyright (Creative Commons)
- To enable the exchange of educational material among educators given certain copyright schemes.

#### **Methodology:**

- Search literature and study relevant other reports to elicit a draft list of needs
- Conduct an internet survey re space medicine education
- Create a study group web site, associated collaboration environment and e-learning environment
- Implement pilot e-courses and relevant tutorials for educators
- Turn digital material into SCORM compliant material
- Experiment with Creative Commons
- Upload on e-learning space
- Experiment with their interaction friendliness and easiness to use.
- Fully report on each activity

### **Time Line: 2 years**

#### **Final Product (Report, Publication, etc.):**

The group will create a site (collaborative site) and an open source educational environment

The final product will be a report composed of various steps/thematic areas of the study group.

A publication in a relevant journal will be considered at the end (e.g. Acta Astronautica)



**Target Community:** initially medical students, which can be extended in all science students, teachers, universities and medical colleges, medical associations and medical doctors, as well as researchers in space medicine, and space life sciences.

**Support Needed:**

In the beginning, local hosting may be done at the Medical School of Aristotle University of Thessaloniki, Greece (hardware and software ready to go):

<http://kedip.med.auth.gr/iaa>

A welcome page and then different courses may be chosen

Username and passwords can be set

Enrolment or free attendance may be enforced / allowed

Provide specific links to/from IAA

If needed, the IAA may look for their own web hosting at a later stage, i.e. IAA server space (may need some software additions there...)

**Potential Sponsors:** Universities, Pharmaceutical companies, space agencies, space industry

*To be returned to IAA Secretariat Paris fax: 33 1 47 23 82 16 email: [sgeneral@iaanet.org](mailto:sgeneral@iaanet.org)*

**Date:** 22.09.2008

**Signature:**

**For IAA Use Only:**



# 17th IAA Humans in Space Symposium

Moscow, Russia, June 7-11, 2009

1st Announcement

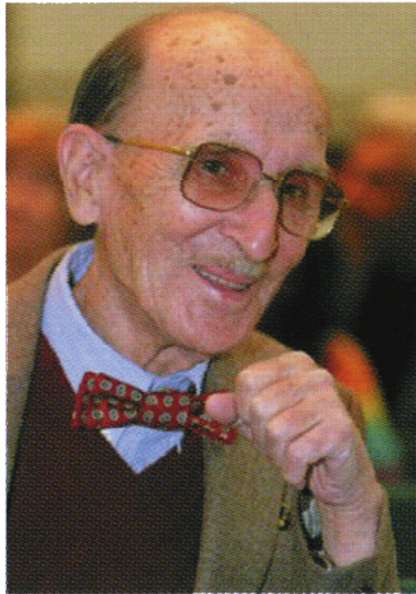


**Principal Sponsor:**

**International Academy of Astronautics**

**Host**

**Russian Academy of Sciences**

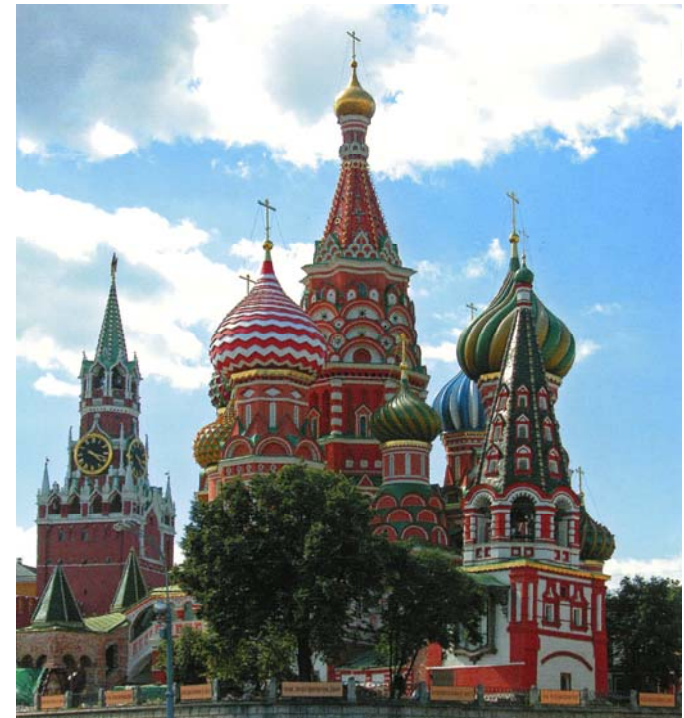


17th IAA Humans in Space Symposium is organized by the State Scientific Center of the Russian Federation — Institute of Biomedical Problems and dedicated to the memory of the prominent Russian scientist Academician Oleg G. Gazenko (1918-2007).



## **17th IAA Humans in Space Symposium is performed with support of:**

- Federal Space Agency of the Russian Federation
- Ministry of Science and Education of the Russian Federation
- Russian Academy of Medical Sciences
- Scientific Council on Physiological Sciences of the Russian Academy of Sciences
- Executive Bureau on Space
- of the Russian Academy of Sciences
- Russian Foundation of Basic Researches
- Federal Biomedical Agency of the Russian Federation
- Russian Academy of Cosmonautics named after K.E. Tsiolkovsky



**17th IAA Humans in Space Symposium will provide a forum for presentation and discussion of topics related to the theme:**

**"Humans in space for life sciences developing, peace and progress on Earth".**

### *Main topics*

#### **I. Living and working in space**

- Human physiology: adaptation to microgravity and countermeasures
- Behaviour, performance and psychosocial issues
- Operational medicine
- Extravehicular activity
- Radiation health issues
- Environment monitoring and control
- Biological (cellular, plant and animals) researches
- Spin offs

#### **II. Future of manned space flights: preparation to Lunar and Martian missions**

- Adaptation to long-term space flight conditions and countermeasures
- Radiation health issues
- Psychosocial issues
- Habitats and environment health issues
- Advanced life support systems
- Planetary protection
- Astrobiology



### III.Relation to the General Public

- Education and outreach activities
- Space tourism

### IV. Papers in other related fields are also encouraged

#### ***Symposium location and date***

Venue: The main Building of the Russian Academy of Sciences

Address: 32A, Leninsky Prospect, Moscow, Russian Federation

Date of the symposium: 7-11 June 2009.

#### ***Call for Abstracts***

Abstracts must be submitted electronically using the format provided on the website.

Deadline for abstracts submission: January 23, 2009.

#### ***Registration***

Registration must be done electronically on the website.

*Mode of payment of registration fee (see website)*

*Accommodation*

*Hotel reservation may be done electronically on the website.*

Registration Fee	IAA members	Non IAA members	For students and accompanying persons
Before April 6, 2009	€ 320	€ 340	€ 120
After April 6, 2009	€ 400	€ 420	€ 160

## ***Organizing Committee***

**Chair:** A. Grigoriev

**Vice- Chairs:** Sh. Chen, J. Davis, A. Krasnov, R. White, M. Zell

## ***Local Organizing Committee***

**Chair:** O. Orlov

**Vice- Chairs:** G. Horneck, A. Romanov, V. Soloviev, V. Tsibliev

**Members:** A. Alferov, M. Belakovskiy, I. Boltunova, A. Dementieva, V. Katuntsev, S. Nikolaev, I. Maksimova, V. Morgun, D. Rakov, T. Samokhvalova, A. Sargsyan, B. Shenkman

## ***Scientific program committee***

**Chair:** V. Baranov

**Vice- Chairs:** V. Bogomolov, J.-M. Contant, R. Gerzer, C. Mukai, J. Rummel, J. Sutton.

**Members:** P. Arbeille, A. Barer, A. Berthoz,

A. Boese N. Buckley, L. Buravkova, J. Charles, G. Clement, A. Cogoli, L. Cohen, J.-M. Comtois, M.-  
A. Custaud, V. Damann, P. Di Prampero, J. Duncan, C Fuller, F. Gerstenbrand, C. Gharib, P.  
Graef, A. Grosz, H.-C. Gunga, C. Haignere, M. Heer, G. Horneck, R. Hughson, E. Ilyin, S. Iwase,  
A. Kaleri, N. Kanas, A. Kotovskaya, C. Kourtidou-Papadelli, I. Kozlovskaya, K. Kreuzberg,  
S. Krikalev, Y. Kumei, R. Kvetnansky, I. Larina, D.Linnarsson, T. Mano, B. Morukov, Yu. Natochin, A.  
Nechaev, P. Norsk, N. Novikova, H. Oshima, Ch. Oman, M. Paltsev, V. Petrov, V. Pochuev, V.  
Polyakov, P. Preu, K. Prisk, G. Reitz, J. Risdall, V. Rogozhnikov, T.Russomano, G. Ruyters, V.  
Salnitsky, C. Sams, V. Schneider, Yu. Sinyak, K. Souza, V. Sychev, S. Tachibana, I. Ushakov, N.  
Vana, D. Williams, L. Young, F. Zhuang



### ***Scientific, technical and cultural tours***

In the days of work of the symposium it is planned to organize tours to scientific institutions of the city, the Gagarin Cosmonauts Training Center and the Mission Control Center. After finishing of the symposium it is planned to organize a trip to Saint-Petersburg.

**Web: <http://iaa-his2009.imbp.ru>**

**E-mail: [iaa-his2009@imbp.ru](mailto:iaa-his2009@imbp.ru)**



**17th IAA Humans in Space Symposium 7-11 June 2009,  
Moscow, Russia**

***Registration of interest***

Please send us further information about:

- ☐ Attending 17th IAA HIS
- ☐ Sponsorship opportunities
- ☐ Hotel accommodation
- ☐ Scientific tours
- ☐ Technical tours
- ☐ Cultural tours

Family name.....  
First name.....  
Company name.....  
Address.....  
City.....Post Code.....  
Country.....  
Telephone.....Fax.....  
E-mail.....

*Please return to:*

*76A, Khoroshevskoye sh., 123007, Moscow, Russia, SSC RF-Institute of Biomedical  
Problems of RAS.*

*LOC of 17th IAA HIS.*

*or fax: 7-499-195-2253*