

# I.A.A. Commission III

## HYDERABAD COMMISSION III MINUTES OF MEETING

meeting date: 23 September 2007 <i>date de la réunion</i>	ref./réf.	page/page 1 / 9
meeting place <i>lieu de la réunion</i>	Hyderabad	chairman T. YASAKA, J MANKINS <i>président</i>
minute's date 23 September 2007 <i>dates de compte rendu de réunion</i>	participants <i>participants</i> Yasaka, Tetsuo (new Chair) Mankins, John C. (new Deputy) Reibaldi, Giuseppe (Secretary) Rauck, Horst (former Chair) Bonnal, Christophe (member) Bruno, Claudio (member) Calabro, Max Genta, Giancarlo Hehua, Ju Kaya, Nobukuki Matloff, Gregory Onoda, Junjiro Pignolet, Guy Sachdev, Savi Saito, Hirobumi Siegfried, William (member) Sunkel, Hans Trivailo, Pavel Vetrella, Sergio  <i>Excused</i>	
subject/ <i>objet</i>	copy/ <i>copie</i>	

# I.A.A Commission III

## HYDERABAD COMMISSION III MINUTES OF MEETING PARTICIPANTS

meeting date 23 September 2007 | ref./réf.  
date de la  
réunion

page/pag 2  
e 9

description/description	action/action	due date /date butoir
<p><b>1. Introduction</b></p> <p>Remarks by the outgoing Chair, Horst Rauck; introduction of new Chair (T. Yasaka) and vice-Chair (J. Mankins), and new Secretary (Giuseppe)</p> <p>Introductory remarks by Tetsuo Yasaka; review of the agenda. Attendance at the meeting this year is somewhat less than typical.</p> <p><b>2. Organization of Commission III</b></p> <p>There was some discussion of the membership of Commission III. Ten (10) full members are allowed, including the officers of the Commission. There are several ongoing members: Christophe BONNAL; Hans HOFFMAN; J. MANKINS, T. YASKA, G. REIBALDI, W. MENDELL, Junijiro ONODA, Lin JIN, Horst RAUCK (which is 9 members).</p> <p>At present, the Commission needs one additional member; we were seeking a member from Russia; however, the person approached indicated that he too busy at this time. Attendees at the meeting were invited to offer suggestions for new members (including, but not restricted to Academy members from Russia or the Ukraine).</p> <p><b>3. Status Report of the Studies</b></p> <p><b><u>Study Group No. 3.1</u></b> – Advanced Propulsion Prospective</p> <p>There was a change in the leadership of this study group (SG) last spring; and an ongoing need for a study group status report. The SG was originally created in 2003-2004 (with SG 3.2); at that time, there was a purposeful split of advanced propulsion from nuclear propulsion. However, at this time the nuclear propulsion SG is now completed.</p> <p>C. Bruno offered to become a contributor to the advanced propulsion SG; an offer that was gratefully accepted. Also the idea was discussed to recombine S 3.1 and S. 3.2.</p> <p><b><u>Study Group No. 3.2</u></b> – Nuclear Propulsion (Claudio Bruno, CB)</p> <p>Good progress has been made in this SG; this cosmic study is essentially completed. A book is in preparation and there is interest on the part of AIAA in publishing the study report. CB is giving them the “right of first refusal” on the publication. (For example, Springer-PRAXIS published a book by CB last year...)</p> <p>A great loss to the community occurred this summer: one of the study participants (David Fearn) passed recently; he was a subject matter expert in electric</p>	<p>G. Reibaldi</p>	

# I.A.A Commission III

## HYDERABAD COMMISSION III MINUTES OF MEETING PARTICIPANTS

meeting date 23 September 2007 | ref./réf.  
date de la  
réunion

page/pag 3  
e 9

description/description	action/action	due date /date butoir
<p>propulsion (and wrote Chapter 5 of the final report from the study). He will be remembered and missed by his colleagues.</p> <p>There was some discussion of the mechanics of publication in book form, and publication on the web. (This could certainly work if there is no profit motive in the publication of the book—e.g., published by a government space agency; however, the question is how this approach works with the Academy's role of "free distribution" of the results of a COSMIC study...) Various issues involved; how to raise money for publishing reports, versus free access. In any event, credit must be given to the Academy for the accomplishment of the study. (This was clear).</p> <p>There is an action for the Commission to resolve this question: what are acceptable means for the Commission and an individual Study Group to obtain publication of a COSMIC Study Report?</p> <p>There was a general observation by T. Yasaka concerning the processes for study group completion (with 3 years), then peer review and revision, and then submitted to the Scientific Activities Committee (SAC) for final approval. Normally these reports are distributed to space related organizations worldwide.</p> <p>Horst Rauck mentioned another route: executive summaries from SG reports can be published in <i>Acta Astronautica</i>. Unfortunately, there can be substantial delays in publication—perhaps as much as 2 years. Various individuals in the IAA (e.g., Jean-Michele Contant, etc.) have indicated that there may be stronger support in the future.</p> <p>Giuseppe R. observed that this discussion highlights an issue for the Academy: what happens to the results of a SG once the study is done? No one focuses on this issue; individuals involved in an SG address mostly the organization and implementation of a study.</p> <p>C. Bonnal mentioned the importance of publishing a PDF of the study report on the IAA website. Perhaps organizations (such as CNES) will publish for free books from studies...</p> <p><b>Study Group No. 3.4</b> – Development of Infrastructure for International Human Space Exploration (William Siegfried)</p> <p>Reported that the study concept was conceived a number of years ago. There are 12 sections to be in the planned report (e.g., introduction, past studies, etc.). Of the 12 sections, 6 authors have had prostate cancer, and Bill Siegfried has had heart surgery. Moreover, there have been similar studies recently. Also, there may also be several good papers presented at this Conference that will inform sections of this report. (Perhaps a report from one of the similar efforts?) Also, there have been efforts by NASA and other space agencies to develop a global exploration strategy.</p>		

# I.A.A Commission III

## HYDERABAD COMMISSION III MINUTES OF MEETING PARTICIPANTS

meeting date 23 September 2007 | ref./réf.  
date de la  
réunion

page/pag 4  
e 9

description/description	action/action	due date /date butoir
<p>So, there are several options for action at this point.</p> <p>WS Proposal: give the SG to March / April; if it is not making good progress by then, it can be terminated. Alternative, it might be re-defined so that whatever is available is (by definition) the result.</p> <p><b><u>Study Group No. 3.5</u></b> – Dealing with Earth-Threatening Asteroids and Comets (Ivan Bekey)</p> <p>I. Bekey is not here at this meeting. No representatives are here this morning, however, there is a status report. Plan is continue to develop and finalize a manuscript by next March—for review and discussion among the members of the committee.</p> <p>The decision is pending on how to plan for a peer review of the report.</p> <p><b><u>Study Group No. 3.6</u></b> – Strategies and Concepts for Future Space Exploration and Development (J. Mankins)</p> <p>Study report delivered some months ago for peer review; comments received during the past 2 months. Received by J. Mankins 2 weeks ago; now being reviewed. Will require some edits to the initial draft report; this will be challenging because the co-author (E. Vallerani) has essentially retired from this effort.</p> <p><b><u>Study Group No. 3.6.1</u></b> – Sustainable Exploration and Development of Space (J. Mankins)</p> <p>This activity was proposed as follow-on to SG 3.6. There was a good start to this effort, with an initial workshop last summer in Kanazawa, Japan on the occasion of the ISTS 2006. This study was never formally entered into the system. However, no formal paperwork for this Commission III study exists in the IAA tracking system.</p> <p>At this time, a proposal was made by the SG chair to defer this SG, pending the completion of (a) the peer review revisions for SG 3.6, and the development of the final report from SG 3.4. This idea was discussed further and then was accepted by the members. Commission III will pursue with vigor the completion of SG 3.4. (J. Mankins will contribute), and the peer review process for SG 3.6. Following this completion, the concept of SG 3.6.1 will be revisited.</p> <p><b><u>Study Group No. 3.8</u></b> – Space Elevator Feasibility and Impact (Peter Swan).</p> <p>No representative is present; however, there will be a meeting of the SG on Tuesday. The plan is to have a final draft report by October 2008 (Glasgow) to come to the Commission, ready for Peer Review. The Group should also provide minutes from their SG meeting later this week.</p>		

# I.A.A Commission III

## HYDERABAD COMMISSION III MINUTES OF MEETING PARTICIPANTS

meeting date 23 September 2007 | ref./réf.  
date de la  
réunion

page/pag 5  
e 9

description/description	action/action	due date /date butoir
<p><b>Study Group No. 3.9</b> – Private Human Access to Space (C. Bonnal)</p> <p>This study group was approved last March following the IPC meeting in Paris. This SG is cooperative with Commission V. The original name involved “tourism”, but this was dropped at pejorative. The study includes various technical and legal aspects. It considers launchers, space stations, etc.</p> <p>The objective is to produce a white paper of some detail; the hope is to produce recommendations—however, it is unclear at this time what such recommendations might comprise.</p> <p>There will be a workshop on this topic next year (in Bordeaux Region) in 2008; this is a logical location with strong industrial involvement (e.g., SNECMA), and a fine conference facility. The call for papers was released this past summer. Abstracts due in February 2008.</p> <p>There is good interest on the part of Commission II, which is chartering a SG on humans in space. Also, there is good engagement from Commission IV.</p> <p>There have been very good reactions from the media and from prospective authors. However, there are some concerns. Many people say “this is a wonderful idea”—“but...it’s not my business. C.B. is hoping that there will be relevant / complementary technical papers coming forward (e.g., on propulsion).</p> <p>What is the strategy on co-sponsorship? This might involve perhaps the AIAA, the British Interplanetary Society in U.K., Astrium, Virgin Galactic, or others.</p> <p>(Note: there is a nice set of viewgraphs on this study group.)</p> <p>There was some discussion of this topic. There is a group “astronaut club” in France that is seeking to promote space tourism. There are several avenues to consider how to support the upcoming meeting.</p> <p>(JCM mentioned willingness to forward information to several individuals in the U.S.)</p> <p><b>Study Group No. 3.10</b> – Technologies to Enable Near-Term Interstellar Precursor Missions (Greg Matloff)</p> <p>Co-chair Dave Fearn passed away this summer. GM was going to work solar sail aspects; DF was going to work nuclear electric aspects. GM is only a corresponding member of the Academy. Really need to have someone that is (a) a full member, (b) expert in nuclear power/propulsion, and (c) a European.</p> <p>It is possible that Claudio Bruno would be willing to become the co-chair; he needs to consider his other obligations and will provide an answer by the end of this week.</p>		

# I.A.A Commission III

## HYDERABAD COMMISSION III MINUTES OF MEETING PARTICIPANTS

meeting date 23 September 2007 | ref./réf.  
date de la  
réunion

page/pag 6  
e 9

description/description	action/action	due date /date butoir
<p><b>Concerning the Peer Review of the Report from Study Group 3.6</b></p> <p>About 50% of the individuals to whom the draft report was distributed have provided comments and feedback on the study. J. Mankins committed to revising the document and providing it at the meeting in March 2008. The revision will need to be re-circulated to the individuals who have provided inputs (or will provide inputs by no later than the end of October).</p> <p><b>4. Status of Hyderabad Conference</b></p> <p>The Commission discussed the status of planning/sessions for the Hyderabad Conference.</p> <p>No information on joint session between George Morgenthaler and Chris Sallaberger (A.5).</p> <p>So far, things appear “ok” for Symposium D.3 (Stepping Stones...) BUT there is a problem with D 3.2 – missing a rapporteur (Perino), and probably missing a co-chair (Suzuki). Also, there is this year two new sessions new Joint Session on Space Technology R&amp;D Management Practices (I believe D 3.5); appears to be proceeding very well; will report at the end of the week.</p> <p>Also, D.4 in Space Elevators—no information as yet (no one is here this morning from this Symposium).</p> <p>T. Yasaka observed that there is a general need to devote more time to Conference considerations during the meetings of the Commission III.</p> <p><b>5. All Other Business (AOB)</b></p> <p>No other business was raised at this time for the meeting of Commission III.</p> <p>Giuseppe mentioned that there will be a number of important topics to be discussed at the C III in March. It appears clear that we will require more time to cover everything. First, we must address the various study groups. Also, we should discuss somewhat more the role of the Commission. (There are by-laws that provide general terms of reference for the Commissions.)</p> <p>Horst R. mentioned that there is the key question: are we bureaucrats or visionaries? Too often, we are bureaucrats, but we should more often be visionaries.</p> <p>Claudio B. mentioned a discussion several years ago with George Morgenthaler: what happens to an SG report after the report is completed?? (Note: there was some additional discussion of the report of the Nuclear Propulsion SG; may choose</p>		

# I.A.A Commission III

## HYDERABAD COMMISSION III MINUTES OF MEETING PARTICIPANTS

meeting date 23 September 2007 | ref./réf.  
date de la  
réunion

page/pag 7  
e 9

description/description	action/action	due date /date butoir
<p>to publish an executive summary online, then the full report through some publisher...)</p> <p>T. Yasaka made a general invitation to everyone to visit the IAA website.</p> <p>There was a general action (to the leadership of Commission III to itself) to confirm the by-laws for the IAA, as they affect the Commissions. However, there are no terms of reference per se.</p> <p>T. Yasaka: we have a challenge that our Commission is very 'busy'—with many SG's. However, this is too many, and several are not as active as they should be. Any comments on the study groups?</p> <p>Horst Rauck noted that there is often a lot of interest in new studies, but after "approval", there is a decay of early momentum that is challenging. Doing more activities (e.g., workshops) may be a way to energize activities more effectively. Individuals presenting at the workshop(s) could provide papers that become the 'body' of the study report itself. There are also challenges in the fact that people who are the members of the Commission don't change very frequently—even though there is substantial change in the leadership of the Commission.</p> <p>There is need, of course, for some balance between our meetings being bureaucratic activities versus visionary activities (having to do with the content of the studies).</p> <p>Another suggestion was offered: it might make sense to seek some review by the various space agencies of ideas for consideration. However, the Academy cannot allow space agencies to "veto" studies to be undertaken. That is not to say that some process for greater engagement of the Agencies might not make sense.</p> <p>Giuseppe R. mentioned that there is a need for more discussion at the beginning and at the end of financing various studies. We may consider some balance between studies that are more in line with the interests of individual space agencies (e.g., propulsion), and those that are more independent and/or advances from the perspectives of the agencies.</p> <p>T. Yasaka said that there is a need at the next meeting of the Commission III for some additional time to discuss the results of a study group (what is the process? What does go to the SAC? etc.) This might be done after the IPC; perhaps have the conclusion of the meeting? This is something to try to arrange.</p> <p>It was announced that there will be a further splinter meeting of the Commission on Friday at 10:00 am for discussion of additional matters, including candidates for new Study Groups. (See the detailed agenda for the IAC for the room location.)</p>		
<p>The meeting of Commission III Adjourned.</p>		

# I.A.A Commission III

## HYDERABAD COMMISSION III MINUTES OF MEETING PARTICIPANTS

meeting date 23 September 2007   ref./réf.	page/pag 8 e 9
--	-------------------

description/description	action/action	due date /date butoir



# I.A.A. Commission III

## HYDERABAD COMMISSION III LIST OF PARTICIPANTS

meeting date 23 September 2007 | ref./réf.  
date de la  
réunion

page/pag 9  
e

9

Name	Email address
Yasaka, Tetsuo (new Chair)	<a href="mailto:tyasaka@nifty.com">tyasaka@nifty.com</a>
Mankins, John C. (new Deputy)	<a href="mailto:john.c.mankins@artemisinnovation.com">john.c.mankins@artemisinnovation.com</a>
Reibaldi, Giuseppe (Secretary)	Giuseppe.reibaldi@esa.int
Rauck, Horst (former Chair)	<a href="mailto:horst.rauck@gmx.de">horst.rauck@gmx.de</a>
Bonnal, Christophe (member)	<a href="mailto:christophe.bonnal@cnes.fr">christophe.bonnal@cnes.fr</a>
Bruno, Claudio (member)	<a href="mailto:Claudio.bruno@uniroma1.it">Claudio.bruno@uniroma1.it</a>
Calabro, Max	<a href="mailto:max.calabro@innerach.eu">max.calabro@innerach.eu</a>
Genta, Giancarlo	<a href="mailto:Giancarlo.genta@polito.it">Giancarlo.genta@polito.it</a>
Hehua, Ju	<a href="mailto:juhehua@163.com">juhehua@163.com</a>
Kaya, Nobukuki	<a href="mailto:kaya@kobe-u.ac.jp">kaya@kobe-u.ac.jp</a>
Matloff, Gregory	<a href="mailto:gregmat@hotmail.com">gregmat@hotmail.com</a>
Onoda, Junjiro	<a href="mailto:onoda@isas.jaxa.jp">onoda@isas.jaxa.jp</a>
Pignolet, Guy	<a href="mailto:pignolet@grandbassin.net">pignolet@grandbassin.net</a>
Sachdev, Savi	<a href="mailto:savi.sachdev@space.gc.ca">savi.sachdev@space.gc.ca</a>
Saito, Hirobumi	<a href="mailto:koubun@isas.jaxa.jp">koubun@isas.jaxa.jp</a>

# I.A.A Commission III

## HYDERABAD COMMISSION III MINUTES OF MEETING PARTICIPANTS

meeting date 23 September 2007 | ref./réf.  
date de la  
réunion

page/pag 10  
e

9

Siegfried, William (member)	<a href="mailto:wsiegfried@ca.vr.com">wsiegfried@ca.vr.com</a>
Sunkel, Hans	<a href="mailto:hans.suenkel@tugraz.at">hans.suenkel@tugraz.at</a>
Trivailo, Pavel	<a href="mailto:trivailo@rmit.edu.au">trivailo@rmit.edu.au</a> , or <a href="mailto:pavel.trivailo@gmail.com">pavel.trivailo@gmail.com</a>
Vetrella, Sergio	<a href="mailto:s.vetrella@cira.it">s.vetrella@cira.it</a>