

## **IAA Study Group Status Report**

**Responsible Commission: 3**

**Study Number and Title: SG 3.16 - Global Human Mars System Missions  
Exploration – Goals, Requirements and Technologies**

**Short Study Description** (repeat from Study Group Proposal):

Human Missions to Mars have been studied individually by several Space Agencies over the past decades. However, a cooperative Human Mars mission framework – including, but not limited to requirements and technologies, is missing.

ISECG is not dealing with the above subject since it is limiting the coordination of the activities to the Mars Sample Return Mission.

**Overall Goal:**

Identify, assess and synthesize a global set of goals with its related criteria requirements for future human exploration of the Mars system and establish technology opportunities and roadmaps in the context of promising cooperative exploration scenarios. The Study should aim to identify means to minimize the risks at global level

**Intermediate Goals:**

The study will consider, but not limited to, the following aspects:

- 1) Mission rationale definition goals with its related criteria: – Political, Scientific, Economical, Cultural
- 2) Questions to be answered with the relevant time lining
- 3) Global set of requirements
- 4) Enabling Technologies required with the required time lining
- 5) Human Factors aspects
- 6) Mission Architecture Options
- 7) Sustainability
- 8) Outreach aspects
- 9) Cooperative Framework
- 10) Decision Roadmap
- 11) Recommendations
- 12) Conclusions

**Progress in past six months:**

A final draft has been prepared and sent to all members of the SG. It is complete, except for the executive summary and the recommendations which will be discussed in the Paris meeting in march

The final document will be prepared after the March meeting and sent to Commission 3.

The main report is thus on schedule.

**.Website Study Information up to date?** (Study Group Membership, Study Plan and Schedule):

Chair: Giancarlo Genta

Co-Chairs: Alain Dupas

Secretary: Jean-Marc Salotti

Study group **Membership** (in alphabetic order) (not all of them are on the website, see below):

Mauro Augelli (CNES, France)  
Nicolas Bérend (ONERA, France)  
Giovanni Bignami (COSPAR)  
Claudio Bruno (University of Rome, Italy)  
John B. Charles (NASA, USA)  
Lin Chen (Lockheed Martin, USA)  
Elisa Cliquet Moreno (CNES, France)  
Gabriel G. De la Torre (Univ. of Cadiz, Spain)  
Nadeem Ghafoor (MDA, Canada)  
Alexey Grushevski (Keldish Institute, Russia)  
Richard. Heidmann (Planet Mars Ass., France)  
Bernhard Hufenbach (ESA, Europe)  
Les Johnson (NASA, USA)  
Nick Kanas (U. of California, S. Francisco, USA)  
David Kendall (Canadian Space Agency, Canada)  
Anatoly Koroteev (Keldish Research Center, Russia)  
Julien-Alexandre Lamamy (Orb. Sc. Corp. USA)  
John Logsdon (George Washington Univ., USA)  
Kohtaro Matsumoto (JAXA, Japan)  
Chris McKay (NASA, USA)  
Susan McKenna-Lawlor (Ireland Nat. U., Ireland)  
Ernst Messerschmid (Stuttgart U., Germany)  
Gian Gabriele Ori (Univ. G. d'Annunzio, Italy)  
Natalia Nikolaeva (Skobeltsyn Institute of Nuclear Physics, Russia)  
Michael Panasyuk (Skobeltsyn Institute of Nuclear Physics, Russia)  
Maria Antonietta Perino (TASI, Italy)  
Viacheslav Petukhov (Moscow Aviation Institute, Russia)  
Yury Razoumny (Russia)  
Pascal Renten (University of Stuttgart, Germany)  
Stephen C. Ringler (SGAC, USA)  
Andreas Rittweger (Astrium, France)  
Christian Sallaberger (MDA, Canada)  
Klaus Schilling (Univ. of Würzburg, Germany)

Alexander Semenkin (Keldish Research Center, Russia)  
Andrea Sommariva (Italy – China)  
Carol R. Stoker (NASA, USA)  
Lin Wei (China)  
Luo Wencheng (China)  
Alan Wilhite (Georgia Tech, USA)  
Cao Xiaohui (China)  
Lu Yu (China)  
Tatiana Zenchenko (Space Research Institute, Academy of Sciences, Russia)

The list on the IAA website is incomplete, and new members have been added: The names to be added are listed below.

- Study plan: see previous section
- Schedule:
  1. A paper will be presented at the 66<sup>th</sup> IAC, Jerusalem, Sept. 2015
  2. The study will be presented at the 9th IAA Symposium on the Future of Space Exploration
  3. The Study will be completed for the 65<sup>th</sup> IAC in Sept. 2015

**Issues requiring resolution?** (recommend approach):

None

**Product Deliveries on Schedule?** (If modified explain rationale):

YES

**Study Team Member Changes?** (List any Study Team Members that you wish to discontinue, and provide names plus contact coordinates of any Members you wish to add on the second page of this Study Update form.) Note: Complete contact information including email, tel. and fax must be provided for all additions. Only Members with complete contact information will be listed and receive formal appointment letters from the IAA Secretariat.)

See below

**Name of person providing Study Group Status** (Study Group Chair or Co-Chair):

Giancarlo Genta  
Study Group Chair

**Status Report Date:**

3 March 2015

## Study Team Membership Changes

Effectivity Date: 20 Feb. 2014

### **Discontinue:**

Name Hideto Yamazaki

Name **John Logsdon**

**Add:** (actually, most of these names were included since the beginning, but are not listed on the website)

Name Claudio Bruno

Name Lin Chen

Name Elisa Cliquet Moreno

Name Nadeem Ghafoor

Name Stephane Gres

Name Richard. Heidmann

Name Bernhard Hufenbach

Name Les Johnson

Name Anatoly Koroteev

Name Chris McKay

Name Ernst Messerschmid

Name Natalia Nikolaeva

Name Michael Panasyuk

Name Viacheslav Petukhov

Name Pascal Renten

Name Stephen C. Ringler

Name Christian Sallaberger

Name Andrea Sommariva

Name Carol R. Stoker

Name Lin Wei

Name Luo Wencheng

Name Alan Wilhite

Name Cao Xiaohui

Name Lu Yu

Name Tatiana Zenchenko

Name Norbert Frischauf

Name Roger Lenard