

IAA Study Group Status Report

Responsible Commission: IAA commission 3 on Space technology and System development.

Study Number and Title: SG3.23, “Human Space Technology Pilot Projects with Developing Countries”

Short Study Description (repeat from Study Group Proposal): At the UN/China Workshop on Human Space Technology held in China, in September 2013, organized by UN Human Space Technology Initiative, CMSA and IAA, more than 31 different countries and regions around the world gathered. The participants defined several recommendations on how to foster the involvement of developing countries in Human Space Technology and this Study Group [SG 3.23] is fulfilling one of the recommendations.

The main goal of this Study Group is to define Pilot projects, with space developing countries, making use of synergies between Human Space Technologies and Sustainable Development activities. For this SG, the space developing countries considered are those having space programs and need not be human spaceflight activities.

The Pilot projects will make use of existing ground and space infrastructures in space fairing countries. The aim is to support scientific and economic growth in space developing countries while getting them involved in Human Space Technologies. Pilot projects shall include not only experiments to be carried out (on ground or in space) or capacity building activities but also implementation of the results in space developing countries activities.

The Pilot projects will be selected following a Call for Proposals issued by IAA. The Study Group will have close interaction with the Human Space Technology Initiative of the United Nations Office for Outer Space in order to insure complementarity of the proposed activities

Progress in past six months:

- Study group had monthly teleconferences through Skype
- Members : Total 34 members (including co-chairs and secretary) from 12 countries as given in Annex-1.
- Prepared a draft call for proposal on Pilot projects with space developing countries and the format is finalized after getting feedback from all members. The draft call for proposal will be presented in the forthcoming IAA symposium at

Costa Rica. The following three areas are being addressed in the first call for proposal.

- Students doing experiments in Ground facilities in bio-astronautics, space food, micro gravity simulation facilities, centrifuge etc - hosted by China (TBC), India (TBC) or United States (TBC)
- Carrying out Parabolic flights in special aircrafts that will simulate microgravity condition for 20-30 seconds and do experiments during flight – Hosted by France (TBC)
- In-orbit experiments related to long duration microgravity, radiation, exposure to space conditions etc - Hosted by China (TBC) and Japan (TBC)
- The Pilot projects to be proposed should be related to the following areas:
 1. Human Spaceflight Technology
 - Simulators for verification, validation and crew training
 - Crew health monitoring systems
 - Crew training and related facilities
 - Crew module systems
 - Crew escape system
 - Environmental control and life support system
 - Flight suit/space suit
 - Human rating of launch vehicle
 2. Technology derived from the human space technology, which are beneficial to people on earth and to the social and economic development of space developing countries.
 3. Capacity Building (i.e. public education)
 4. Crew physiological and psychological related
 5. Innovative propulsion systems for interplanetary missions
 6. Integrated vehicle health monitoring system
 7. Space medicine and bioastronautics
 8. Sharing of facilities

- Release of call, if accepted, will be by June 2016.
- SG3.23 meeting is arranged at Costa Rica

Website Study Information update: (please give any update regarding Study Group Membership, documents, Study Plan and Schedule):

- There are 34 members in the group now and list is available in website.

Issues requiring resolution? (recommend approach):

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.)

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

Dr Giuseppe Reibaldi (Co-chair, Italy) and Prof.Fengyuan Zhuang (Co-chair, China),
Secretary :Dr. Unnikrishnan Nair S. (India)

Status Report Date: 29 February 2016

Study Team Membership Changes

Effectivity Date:

Discontinue:

Name
Current email address

Add:

Name
Current email address
Tel.
Fax
Mailing address

No	Name		Country	Email
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