

IAA Study Group Status Report SG 1.4

Responsible Commission:

One, Space Physical Sciences

Study Number and Title:

1.4 The Next Steps for Human Space Exploration: What are the Alternatives?

Short Study Description:

To compare two different approaches for human exploration beyond low Earth orbit leading ultimately to the human exploration of Mars. Both concepts utilize evolutionary architectures to achieve the Mars goal. One concept, proposed by U.S. President George W. Bush in January 2004, and subsequently adopted by NASA, would utilize the Moon for testing operational techniques and the demonstration of technologies needed for Mars. An alternative concept, described in an IAA Cosmic Study entitled, “The Next Steps in Exploring Deep Space”, would use the Sun-Earth L2 Libration Point and near-Earth asteroids as stepping stones to Mars. The primary factors that are used to evaluate the two concepts are:

- 1. Science value**
- 2. Cost effectiveness**
- 3. Mission risk**
- 4. Flexibility**
- 5. Sustainability**
- 6. Extension to other exploration destinations (especially Mars)**

Progress in past six months:

A meeting of the Study Group was scheduled for the IAC in Hyderabad on September 26, 2007. Unfortunately, the only person at this meeting was the Deputy Study Chair, Dr. Ralph McNutt. The main reason for the poor attendance was that, a few weeks before the IAC, several members decided not to attend the Conference due to security concerns. The few members who did attend the Conference had other conflicts. Nevertheless, we have scheduled another meeting of the Study Group for March 25, 2008 in Paris, and expect to have a much better turnout of members at this time. Moreover, we are still planning to present our preliminary findings in Session A5.3 at the IAC in Glasgow.

Website Study Information up to date?

The following members have been withdrawn (due to inactivity)

Benton Clark

Bernard Foing

Thomas Jones

Douglas O’Handley

Jozef van der Ha

Issues requiring resolution?

None at this time

Product Deliveries on Schedule?

Interim results of study will be presented at IAC 2008 in Glasgow, Scotland

Plan to submit Final Report to IAA in Fall 2009

Name of person providing Study Group Status :

Study Chair, Robert Farquhar

Status Report Date: December 7, 2007