

## **IAA Study Group Status Report**

### **Responsible Commission:**

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:**

This Study is just beginning. We held a preliminary meeting of the Study Group at Cornell University on July 6. However, the attendance for this meeting was rather limited. The first full-scale meeting of the Study Group will be held at the IAC in Valencia on October 4, 2006. At this meeting, it is planned to form sub-groups with defined study responsibilities. A schedule for the various study tasks will also be determined.

### **Website Study Information up to date?**

Study plan and schedule may be updated after our initial meeting at the IAC. Complete contact information on the Study Team Members will be provided following the IAC.

### **Issues requiring resolution?**

None at this time.

**Product Deliveries on Schedule?**

Yes.

**Study Team Member Changes?**

As stated above, this information will be provided after our initial meeting at the IAC.

**Name of person providing Study Group Status:**

Study Chair, Robert Farquhar

**Status Report Date:**

September 9, 2006.