

July 2, 2009: Committee Subgroup Progress Reports

Subgroup on International and Interagency Integration

Gen. Lyles, subgroup lead, reported that he is gathering information from a variety of sources, including the National Academies Committee on the Rationale and Goals of the U.S. Civil Space Program – in which the General serves as Chairman. The reports under review address both international and interagency activities. Pentagon leaders are currently conducting a space posture review, relative to work with NASA. Although this review is still in its early stages, Gen. Lyles said he has been able to obtain some of the information it is producing.

Subgroup on Shuttle and International Space Station

Dr. Ride is lead of this subgroup. She said it is gathering basic information on Shuttle, such as facilities, current status of contracts and plans for transition beyond the STS Program. The subgroup is gathering information on three scenarios that would examine Shuttle's implications on NASA's broader space policy and objectives.

In addition, the subgroup arranged for briefings on independent studies of: human-rated EELV; Constellation assessment; and ISS life extension. Among the questions to be addressed in the ISS life extension study are:

- What are the technical drivers for extending ISS?
- What are the capabilities of ISS components? Which ones can be resupplied with the Shuttle, and which ones can't? What are the expected life expectancies of these components?
- How long can ISS reasonably be extended when the capability to supply replacement parts is diminishing?

The subgroup is investigating a number of potential scenarios for ISS, with the cost implications of each. One of these scenarios would be to deorbit ISS in 2016. Other scenarios to be explored include various ways to operate ISS with U.S. cost and involvement reduced or eliminated. Another case to be considered is adding to the research capabilities on board the Station. In all of these, the opportunities for international participation will be examined, as well as the potential for different management structures. The subgroup might also address the question of whether the ISS could be preserved for some period of time in such a way as to keep it viable for later use.

Subgroup on Access to Low Earth Orbit

Mr. Bejmuk, subgroup lead, said Aerospace is conducting an assessment of technical cost, schedule and other considerations for Constellation, as well as the proposed Side-Mount,

Shuttle-Derived, and Heavy-Lift Vehicle. (Mr. Bejmuk noted the differences between Side-Mount and Shuttle C.) To maintain a level playing field, he said all the technologies under review – including the DIRECT proposal and the vehicles being developed by Orbital Sciences and SpaceX – should be evaluated in the same fashion, and he is working to arrange that.

Subgroup on Exploration Beyond Low Earth Orbit

Dr. Crawley, who leads this subgroup, said that he expects them to analyze approximately five destination-based scenarios to present to the full Committee. He described the intended method for analyzing each scenario. The subgroup has developed eight questions, the answers to which would help shape the subgroup's analysis and determine any potential recommendations to the full committee. Two of the questions allow the subgroup to match up the beyond-LEO cases with those leading to LEO. One is the question of what launch vehicles are available; the other is the potential for in-space fuel depots and fuel transfers. The subgroup will also examine assessments of technology, engaging international partners and commercial ventures. In addition to the five subgroup-defined scenarios, several other good comprehensive architectural studies will be examined. One of these is a joint ESA/NASA study completed last year, and another is the report coming out of a "blue sky exercise" that NASA Advisory Council Chairman Dr. Kenneth Ford is leading.