
Conference Report

What future for the U.S. space program?

by Marsha Freeman

The annual Eascon conference, sponsored by the U.S. Institute for Electrical and Electronics Engineers (IEEE), was the scene for an angry clash among experts concerning the future of the U.S. space program—a controversy reflecting the overall disarray of the program as a result of Washington's budget-cutting mania.

This was the first in a series of conferences on the space program scheduled for this fall. A meeting to discuss detailed Space Station design had to be canceled two weeks before, due to the chaotic state of the program.

"NASA is grossly underfunded," stated Space Station head Dr. Andrew Stofan, at the Sept. 8 conference in Washington, D.C. Stofan, who recently came to lead the program and was formerly the director of the NASA Lewis Research Center in Cleveland, said that if the space agency is to rebuild the Space Shuttle fleet, and build the Space Station, "we can't have a fixed pie."

Former NASA scientist and current head of the National Oceanographic and Atmospheric Administration, Dr. Anthony Calio, went further, and called for a "Marshall Plan" for space. A "bold stroke" is needed for the space program, like the "rebuilding of Europe after the war." This effort must include the "best minds" available, he said.

But the civilian space program is facing a near-terminal budget crisis, and even the military program is in trouble, as Donald Latham, Assistant Secretary of Defense for Command, Control, Communications, and Intelligence, pointed out. "The realities of the defense budget are a disaster, especially in the House," he said.

One speaker at the conference, who has personified the cynical cost-benefit analysis approach to science, was former White House science adviser George Keyworth. He stated that there is still "no economic argument for the Space Station," and that the National Commission on Space's recommendations for a Moon-Mars mission "missed a magnificent opportunity" by not presenting President Reagan with recommendations "that could be implemented."

The dilemma facing NASA

NASA is now facing a situation where there has been a presidential-level decision to build an orbiter to replace the Challenger, but no commitment to provide the financial re-

sources necessary to do that. The administration has requested a \$272 million add-on to the Fiscal Year 1987 budget, which begins on Oct. 1, but such a small amount of money will delay the start-up of construction for six more months.

The White House has only vaguely stated that the rest of the \$2.9 billion will come from "savings" inside NASA, and possible "savings" from "other government agencies." Escalating costs to pay for the Challenger investigation and the recommended modifications of the Space Shuttle fleet by the Rogers Commission, have left NASA with no "savings," and the possibility of severe cut-backs.

Getting back to business

NASA Space Shuttle head Rear-Adm. Richard Truly briefed the assembled engineers on the progress being made in getting the space program back in business. He began his talk stating there was "a lot of pride" in the successful Delta launch from Cape Canaveral on Sept. 5. He stated that the Strategic Defense Initiative (SDI) experiment had only a one-minute "launch window," and that the Delta had redesigned and requalified electrical components.

Truly reviewed the latest NASA planning regarding the payload manifest, or scheduling, for the Shuttle. The Defense Department has determined that only 4 of the 66 payloads they had been planning to launch on the Shuttle in the next few years had to be man-tended. The other 62 payloads can be off-loaded to expendable launch rockets, and the DoD has doubled its procurement plans for the expendables, to accomplish this.

The great majority of the NASA payloads, including space science missions such as the Hubble Space Telescope, life science, and other experiments, and Spacelab are Shuttle-unique. Only 22 of the 132 NASA payloads can be put on expendable rockets. The scientific community is facing multi-year backlogs in missions, and some space applications payloads also face a schedule slip of about three years.

Ian Pryke, the Washington representative of the European Space Agency (ESA) described the ambitious plans of the Europeans for improvements in the Ariane rocket, and new space science missions over the next few years. At their ministerial level policy meeting last January, the ESA member states decided to increase their space science budget 5% per year to 1990. This increase will support the Hippacros program, to produce a star catalogue of 100,000 stars, an infrared space observatory, spacecraft for the solar/terrestrial program, and other initiatives.

European governments as well as Japan have a high degree of participation in the Space Shuttle program, and have made substantial commitments to the Space Station effort, as well. But now, a reevaluation of this dependence on the United States is under way. It is clear, however, that at the current size of these efforts—about \$1 billion per year in Japan, and only \$760 million for ESA—participation in the order-of-magnitude larger U.S. program remains crucial for these nations.