Europeans Agree Not to Go It Alone

Europe's space ministers last week finally laid to rest their once-grandiose plans to establish an independent European manned space capability. Meeting in Granada, Spain, on 9 and 10 November, they approved a strategy that will link Europe's space program more closely to those of both the U.S. National Aeronautics and Space Administration (NASA) and the new Russian Space Agency.

The space ministers, as expected, effectively abandoned plans to build the $7.6 billion Hermes spaceplane, officially putting to an end months of trying to shrink the project enough to fit into the European Space Agency's (ESA) tight budget. Instead, they endorsed a proposal from ESA's director-general, Jean-Marie Luton, to study the feasibility of building a similar reusable space vehicle in collaboration with the Russian Space Agency (*Science*, 18 September, p. 1617). A final decision on whether to go ahead with the project will be made in 1995.

The agency's 13 member states also gave the go-ahead for ESA's other large manned space project: a laboratory called the Attached Pressurized Module (APM) that will be bolted to the U.S.-led Space Station Freedom. But to win the unanimous approval of the assembled ministers, Luton had to agree to reduce APM's estimated $3.2 billion cost by 5%. "Most of the savings will result from more stringent contracts with industry," says Jean-Jacques Dordain, one of Luton's close aides. The long-awaited green light for APM—which was delayed because the ESA members wouldn't approve the agency's long-term plans until the fate of Hermes was decided—means that the lab should be ready on schedule in 1999.

One question surrounding ESA's involvement in Freedom has yet to be settled, however. The ESA member states want NASA to agree to keep Europe's contribution to the station's running costs below a fixed ceiling. Dordain suggests that ESA should not spend more than about $380 million a year on Freedom once the station is in orbit. But NASA is unlikely to respond any time soon. "It's premature to get into any figures," says Jim Higgins, chief of NASA's international policy branch.

Most ESA members are putting a brave face on the abandonment of their dream to develop an autonomous manned space program. But UK space minister Edward Leigh—whose government never signed on to the Hermes project—is delighted. Closer cooperation between ESA, the Russian Space Agency, and NASA "could in time contribute to the evolution of a global space agency," he said at the close of last week's meeting.

–Peter Aldhous

minimal scientific instrumentation to be launched at extra high speed on a powerful rocket. Staehle took some vu-graphs along to the Academy Awards, showed them to Goldin, and ever since, Goldin has been a fan.

Whatever the merits of the Pluto mission, scientists worry that it could upset the hard-won 5-year plan, hammered out by space scientists in 1991. Anticipating a funding crunch, representatives of each discipline got together with Fisk at Woods Hole, Massachusetts, and worked out a peace treaty, of sorts, stating which projects should take precedence. They agreed that a big mission to Pluto and Neptune should be slated for development in the late 1990s, but only after NASA had begun a high-energy solar physics project and a large infrared telescope. Goldin now appears to have scrapped that plan, along with Fisk's office.

Scientists have sounded their alarm in two public notes. The AAU group issued theirs on 3 November, arguing that a breakup of the science office threatens the "basis of success" by dismantling the one forum in which NASA was able to make "difficult trade-offs and prioritizations." Multidisciplinary missions, the panel said, will now become much harder to manage. When Goldin learned that the message had gone out, he met with the authors in the hope of getting it revised or retracted. According to panel chairman Mason, the members came away "mollified," feeling that Goldin's "heart was in the right place" but not ready to retract what they had said.

Meanwhile, the SSAAC advisory panel picked up the theme, saying its members were "deeply concerned about the substance and timing of the recent...reorganization of OSSA." They "applaud" Goldin's "vision" but urge him to keep science planning under one individual with "line authority" for setting budgets. The institutional framework is vital, they say, even though Goldin has promised to develop a coherent research strategy for the agency. The panel notes, "We cannot ignore the possibility that the new president will appoint a new administrator," who may not work to achieve a consensus on the scientific program.

Moved upstairs. NASA's new chief scientist, Lennard Fisk.

Goldin gave the scientists his rationale at what may have been the final meeting of Fisk's advisory group at NASA headquarters on 5 November. He said he decided to reorganize NASA without consultation because some actions cannot be widely debated. The earth sciences programs are being set up on their own, Goldin said, to reflect their growing importance, Congress's keen interest in them, and the rapidly increasing budget of the Earth Observing System. Aeronautics is also being elevated because it was badly neglected in the past. Some functions—space materials research and life sciences—have been made "homeless" by the reorganization, but Goldin promised to get them settled in a niche by "the end of December." And to worries that NASA will not be able to forge a consensus for its scientific agenda, Goldin promised to seek outside advice at the highest level, through the chief scientist.

But the SSAAC group warned that the consensus Fisk created was "fragile" and would be hard to rebuild if shattered. Goldin responded by saying he sensed the scientists were opting for a "bunker mentality," "circling the wagons," and "holding onto the past." It is a weak strategy, he said. A future NASA administrator might come along, Goldin warned, and "with a wink and a nod" eliminate a big project like Cassini, in one stroke wiping out the planetary program. A better plan in tough fiscal times, Goldin said, would be to drop some entire programs and "start planting some small to moderate seeds" that would lead to numerous but less expensive projects in the future. Spreading science throughout the agency rather than concentrating it in a self-centered workshop, he argued, will improve the quality of work in other offices and broaden the support for science.

It remains to be seen whether this vision will work as Goldin intends, and whether Goldin himself will be asked to stay on at NASA to continue the revolution he has begun. But no one denies that he is moving boldly in a new direction and that the changes he's started are substantial. As Goldin himself told the scientific advisers on 5 November, "My job is not to be loved. My job is to cause everybody to think about getting to their discomfort zones. And I will do just that."

–Eliot Marshall