
Science Policy

Europe takes a step toward the Moon

by Marsha Freeman

The European Space Agency (ESA) released a declaration on June 6 which, while leaving open the question of manned lunar missions, does put on the agenda international discussions of missions to the Moon. The statement followed an International Lunar Workshop in Beatenberg, Switzerland from May 31-June 3. While it included participation from the United States, Japan, and Russia, its purpose was to help ESA establish a policy for European lunar missions.

The declaration states that the "meeting was enthusiastic about the rich opportunities offered by the exploration and utilization of the Moon." It continues that the workshop participants agreed that the first in a series of "evolutionary phases" would focus on lunar orbiters, and that a later phase would include robotic lunar landers and roving vehicles on the lunar surface. While these activities *could* be precursors to manned missions, there was no consensus that this was necessary or inevitable.

The declaration states: "The phased approach allows the differences of opinion over the role of humans in space and the economic utilization of the Moon to be assessed later in the light of results of earlier phases." Bowing to the pressure from pro-austerity policymakers in the ESA nations, and ignoring the fact that there has been an Apollo program, the declaration timidly states: "As the program progresses, it is possible that the attractions and benefits of human presence on the Moon will become clearly apparent."

According to those on the scene in the European space program, manned space flight has always received less emphasis and support there than in the United States. The academic community of scientists is a stronger and more vocal constituency in space policy than in the United States, and strained budgets have made it even more difficult for advocates of manned missions to prevail. In the past few years, cuts in ESA's budget have halted the Sanger project and the Hermes space plane.

To the credit of those promoting an aggressive manned space effort, the document does include the formulation: "It is evident, however, that the Moon would represent the next logical step and a testbed in any plans of human expansion into the solar system."

One of the two workshop participants from the U.S. National Aeronautics and Space Administration (NASA) reports that while he thought the declaration was an important first step toward discussing a return to the Moon, there were some from ESA who, like himself, were disappointed in the results of the deliberations.

The day before the workshop began, Director of Science Roger Bonnet had made a presentation in Paris at ESA headquarters at a breakfast for the press, and stated that the lunar program under consideration would "culminate in the establishment of a manned Moon base." Bonnet and ESA astronomy coordinator Sergio Volonte explained that the manned lunar base would include a research laboratory, perform geological investigations, and develop the technology to produce lunar oxygen. The lunar initiative "can serve as a forerunner for a later mission to Mars," they stated. The consensus document that was agreed upon fell short of their expectations.

A message to Washington

Europe is sending a twofold message to the United States. First, that it is time to put lunar exploration back on the space agenda. This is well-timed, because the 25th anniversary of the first manned landing on the Moon will be celebrated on July 20. This would be the perfect opportunity for President Clinton to present new initiatives in space policy.

So far, his administration has focused almost exclusively on the international space station, which this year, like the past five, will face a tough fight for its existence in the Congress. The President has brought the Russian Space Agency into the program as a major player. This has concerned the Europeans, who have been participants since President Reagan announced the station in 1984 and have spent more than \$1 billion on their Columbus laboratory and related equipment.

Second, the Europeans are sending a warning. Until now, most of the European solar system scientific exploration programs have been joint efforts with the United States. Their entire manned space program is dependent upon American or Russian launch vehicles—the Space Shuttle and the Soyuz. But if the United States terminates the international space station, which will have dire consequences for the Space Shuttle, there are hints that this new lunar project may be considered as an alternative to it.

Indicating that Europe is no longer willing to depend entirely on the space superpowers, Sergio Volonte stated on May 30 in Paris, "If ESA wants to give a push forward to an international Moon initiative, it must be able to propose a first step which can be developed both technically and financially with purely European means."

Next year, the ESA Council will consider proposals for the phased evolutionary lunar program of the declaration, and in 1996 there will be a second International Lunar Workshop to review the progress.