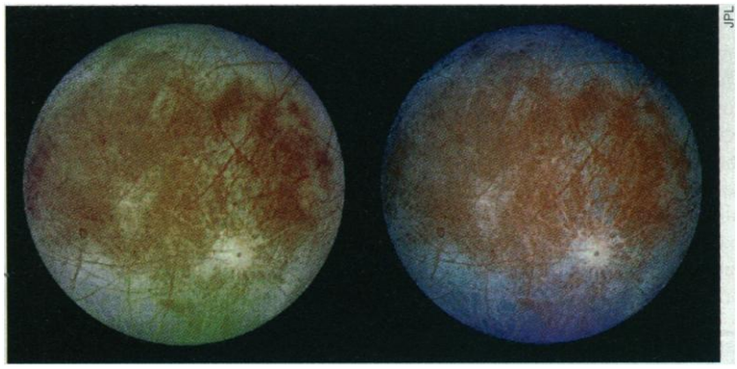
SPACE SCIENCE

Origins Researchers Win Gore's Ear, Not Pocketbook

Last week, the scientific buzz about the possibility of fossil life on Mars and the significance of planets circling other stars earned the rapt attention of Vice President Al Gore. For two-and-a-half hours, Gore led a discussion with researchers and theologians about the meaning of this year's spectacular findings. "It had the air of a salon," says one impressed scientist who took part. "It was very focused and intelligent."

Focused, yes, but not on budgets or specific programs. That topic, which is on the minds of space scientists as Administration and congressional leaders prepare for a February summit to discuss NASA's long-term budget crisis, was off-limits to participants gathered in the ornate Indian Treaty Room across from the White House. Gore nevertheless showed keen interest in the latest research on the origins of galaxies, stars, planets, and life, and the scientists came away encouraged. "I'd say that everybody at the meeting believes this will help provide support for our activities," says John Bahcall, an astrophysicist at the Institute for Advanced Study in Princeton, New Jersey, and one of 18 scientists at the meeting.



High hopes. Space scientists seek support for missions to possible sources of life, such as Jupiter's moon Europa.

Converting that interest into hard support will take more than talk, however. Although a senior White House budget official said at the end of the meeting that he would look for ways to protect space science in the coming years, neither he nor Gore made any promises. Indeed, according to government sources, the White House will present a plan early next year to chop NASA's 1998 budget by about $200 million below the current $13.7 billion. Space science, they add, will take a share of that reduction in the current plan for the 1998 request. Looking ahead, the Administration sees NASA's budget declining to about $13.2 billion by 2002—a drop that's not as steep as had been foreseen a year ago, but it would still force tough decisions on what programs should be scaled back or canceled.

The competition for those limited dollars will be fierce. Russia's reluctance to fund its part of the space station, coupled with cost overruns in the U.S. program, could require additional funds beyond the $2.1 billion NASA spends annually. And despite efforts to reduce the cost of the Earth-observation satellites and data systems that form the heart of Mission to Planet Earth (MTPE), its $1.3 billion annual budget is still projected to grow. With the space shuttle and NASA's institutional budget already having undergone significant cuts, there are few areas outside the $1.9 billion space science program large enough to cover such a decline.

As a result, the heady pace of discovery and Gore's interest could not have come at a better time for the community. Gore has long supported MTPE as part of his interest in global environmental change, and he was the key architect of a 1993 deal that brought Russia into the space station program. Until the August announcement of possible organic causes for fossillike structures found in an ancient Mars meteorite (*Science*, 16 August, pp. 864 and 924), however, space science had few advocates in the White House. "Clearly, space scientists have more leverage now than they have ever had," says one Administration official.

What the scientists brought to the table last week was a 16-page study of the astonishing advances in understanding how the universe formed and life began. It advocates a loosely organized effort, called Origins, that would unite findings from a host of disciplines (*Science*, 8 November, p. 912). The paper that the scientists presented—the result of a 28 to 30 October workshop by a National Research Council (NRC) panel featuring 40 researchers from a variety of disciplines—finds little wrong with current NASA and National Science Foundation plans. The group suggested that efforts include a variety of work—from studies of life in extreme environments on Earth and molecular sequencing of newly discovered organisms to robotic missions to moons of Saturn and Jupiter thought to contain the ingredients necessary for life. An interferometer in space proposed by NASA could give astronomers a glimpse of Earth-like planets circling other stars, while ground-based telescopes provide important data on how elements were created in the early universe.

Gore was clearly engaged by the discussion, according to several participants, peppering those in the room with questions about new branches of life recently discovered on Earth, the likelihood of past and present life on Mars, and the larger implications for society. "He was having a good time," one participant says. In a statement after the meeting, Gore called the gathering "exhilarating and thought-provoking."

For the most part, the researchers held their tongues and did not ask the vice president directly for help. "Sometimes things are so clear you don't have to say them," says Claude Canizares, a Massachusetts Institute of Technology astronomer who co-chaired the NRC panel that produced the white paper. "This either sells itself or it doesn't." Explaining what researchers are doing is "essential before one talks about levels of funding," says Mary Jane Osborn, a University of Connecticut microbiologist who attended the meeting.

She and her colleagues didn't really have a choice. Administration officials said before the meeting that any talk of budgets or programs would be inappropriate, and Gore brushed off a suggestion from one participant that the federal government should begin an Apollo-style effort to examine the origins of life and the universe. But Gore pledged in a statement after the meeting that NASA will continue "a robust space science program," and he called the Origins effort "a vital contribution" to U.S. research. And T. J. Glauthier, a senior Office of Management and Budget official whose portfolio includes NASA, said at the close of the meeting that he would work to find ways to protect the program from cuts.

Space scientists say they're not shooting for the moon. But in an era of downsizing, even a whiff of a stable budget is good news. "It would be foolish to ask for luxury," says Canizares. "We just want to be able to make reasonably steady progress."

–Andrew Lawler