

Random Walk

Space Orbiter

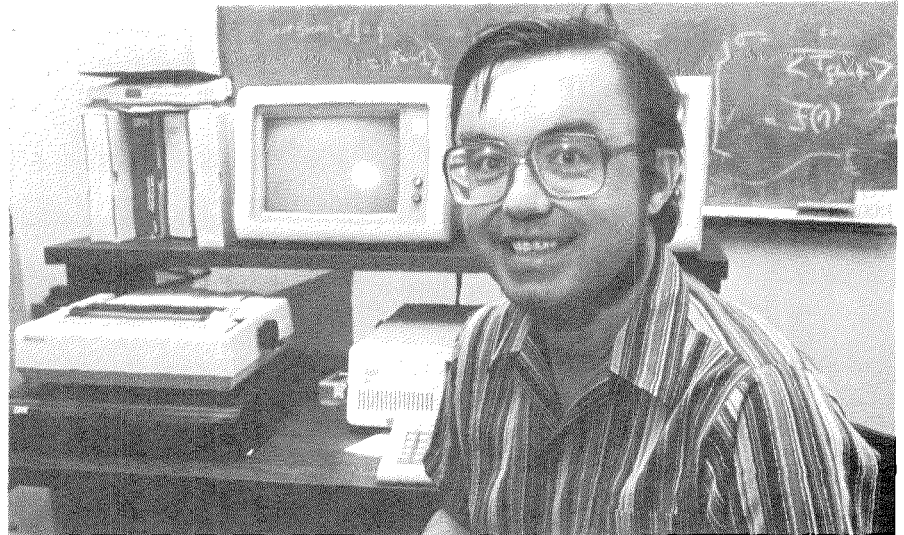


IF THESE men look a little spaced out, it's all in a good cause. In preparation for actually working in space, they were participating in a simulation of an experiment that included periods of weightlessness. The second man from the right is Caltech alumnus Robert Parker (PhD '62 in astronomy), a scientist-astronaut who was named one of two mission specialists for the Spacelab 1 flight slated to be launched into earth orbit aboard STS-9. That trip will involve nine days of working without the comforting pull of earth's gravity.

At the time he was selected as one of our scientist-astronauts in 1967, Parker was an associate professor of astronomy at the University of Wisconsin, who had a strong interest in space exploration. Working for NASA, he has been a member of the astronaut support crews for the Apollo 15 and 17 missions and served as program scientist for the Skylab Program Director's Office during the three manned Skylab flights. He was awarded the NASA Exceptional Scientific Achievement Medal in 1973 and the NASA Outstanding Leadership Medal in 1974. Among his other accomplishments are over 2,500 hours flying time in jet aircraft.

Parker is the one of a distinguished group of Caltech alumni to travel in space. They include Frank Borman (MS '57), who was an astronaut aboard Gemini 7 and Apollo 8. Harrison Schmitt (BS '57) landed on the moon from Apollo 17. Edward Gibson (MS '60, PhD '64) was one of the crew of Skylab 3. And Gordon Fullerton (BS '57, MS '58) has piloted the space shuttle Columbia.

Fox Tale



GEOFFREY FOX, professor of theoretical physics, has been named Caltech's first dean for educational computing — a post in which he will oversee the Institute's investment in computing facilities and development of creative ways to use those facilities in education.

Making plans for "educational computing" — and implementing them — is still in an early stage, but Fox has some interesting and innovative ideas. For one thing, students will govern the major student computing facility. For another, there will be a wide array of hardware and software, to avoid graduating students who know about only one type of computer or one operating system. The Institute has recently upgraded or purchased a number of computers from several corporations in pursuit of this goal, and is currently adding 100 computers for undergraduate use. The hope is that in five years there will be about

one station per student.

Important as hardware is, the real challenge will be to develop the use of computers for educational aims, not just in engineering, but in physics, chemistry, biology, geology, and the humanities as well. As a beginning, new courses in computer science and in computational physics and engineering have been added this year. But, says Fox, "we don't plan to lose our students to a CRT screen. We will continue to maintain balance with rigorous and excellent teaching."

In addition to his work in physics, Fox has served as executive officer for physics and is a leader in a major project at Caltech to develop a new kind of supercomputer, based on concurrent processor architecture. He received his PhD from Cambridge University, and has done research at the Institute for Advanced Study in Princeton, and for the Brookhaven and Argonne National Laboratories.

Watson Lectures

PAUL JENNINGS, professor of civil engineering and applied mechanics, led off the fall Watson Lecture Series on October 26 with a discussion of the Coalinga earthquake. For our readers who couldn't attend, we offer some of the same information in "Lessons from the Coalinga Earthquake," an interview with Jennings that begins on page 6 of this issue of *E&S*.

The next four Watson Lectures include "Is the Population Bomb Still

Ticking?" by Alan Sweezy, professor of economics, emeritus (November 16); "New Approaches to Cancer Diagnosis and Treatment," by John Baldeschwieler, professor of chemistry (December 7); "Innocence and Experience in the Immune System," by Ellen Rothenberg, assistant professor of biology (January 11); and "Big Brother in Orbit — What Has He Learned?" by Alexander Goetz, senior research scientist at the Jet Propulsion Laboratory (January 25).