

Thomas Jefferson, and none of their actions have been overridden—not yet.

Meanwhile, there are rumblings over the expected shortages of funds for fiscal 1974. The President proposed a \$500 million budget for the National Cancer Institute in 1974, but a memorandum written last November by NCI Director Frank Rauscher and disclosed this week reports that Rauscher needs at least \$640 million “to carry out the objectives the executive and members of Congress have often enunciated.”

Reducing the budget below \$640 million, said Rauscher in the memorandum, would restrict clinical trials in immunodiagnosis and immunotherapy, hot new areas of cancer diagnosis and treatment (SN: 5/27/72, p. 341; 6/9/73, p. 367; 6/23/73, p. 408). New cancer drugs would not become available. Industrial contracts to develop equipment to automate Pap smear tests for cervical cancer would have to be postponed. The programs to find viruses or environmental chemicals that trigger cancer would have to be slashed.

In a joint statement this week when releasing Rauscher's memorandum, Sen. Warren Magnuson (D-Wash.), chairman of the Senate Appropriations Subcommittee on Health, and Senate Democratic Leader Mike Mansfield, denounced the President's crash program to conquer cancer as a “fraud on the American people.”

The House has approved \$522 million for the 1974 cancer fight. The Senate Appropriations Committee has not yet voted on the bill, but indications are that it will go as high or higher than the House version. If it is, Melvin R. Laird, the chief domestic adviser to the President, says he would recommend a Presidential veto. □

Second Soviet probe heads toward Mars

The Soviets launched Mars 5 last week on the heels of Mars 4 (SN: 7/28/73, p. 55). Both are due to arrive in the vicinity of that planet in mid-February.

The two spacecraft are similar in design. According to Tass, “Simultaneous scientific research by the two stations will make it possible to obtain full data about the planet and the dynamics of physical processes which occur in space.” No mention is made of life-detecting instruments on the landers such as those planned for the U.S. Viking landers in 1976.

The Soviets were the first to land a spacecraft on Mars. Mars 3 touched down on the surface during the great dust storm that encompassed the planet in 1971. Signals from the spacecraft were received for only 20 seconds. □

august 4, 1973

A common problem in an uncommon place

The second crew of Skylab astronauts were struggling this week with a problem that faces many world travelers—motion sickness. Astronauts Alan Bean, Jack Lousma and Owen Garriott were launched on schedule July 28 to meet the orbiting Skylab workshop and begin their planned 59-day stay in weightlessness.

When they arrived at the space station which has been unmanned for over a month, they encountered a variety of minor difficulties. They had trouble finding things the first crew had apparently misplaced. They had an annoying awakening early one morning because of a pressure leak due to an improperly closed door on the trash airlock. They had to mop up water from a leak in one of the tanks. They had a problem with the condensation system which removes water from the cabin air.

They even had some pet problems. An electrical overload caused loss of the system housing mice and vinegar gnats. Space biologists had hoped to learn something about the effects of weightlessness on the animals' biological rhythms. Still intact, however, were the spiders, Arabella and Anita, who will be watched for the web-weaving in weightlessness. And Garriott's minnows were performing as predicted. He reported they were disoriented in their aquarium. “They think they are swimming toward the surface,” he said, “and sure enough they are heading straight down.”

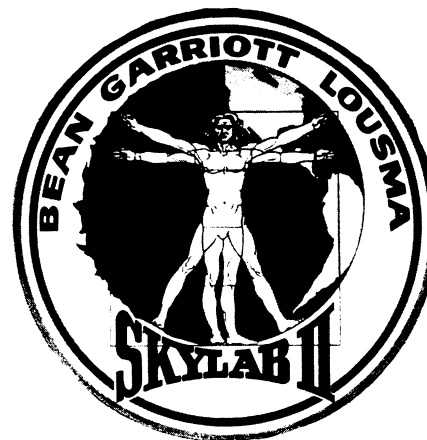
The minnows weren't the only disoriented ones. The astronauts' motion sickness, which began on their first day in space, did not go away. By their fourth day in weightlessness, they were feeling better, but not up to par. “We certainly don't feel good,” Bean reported. “Nobody does.”

Lousma had been hit by the motion sickness first, shortly after the spacecraft went into earth orbit. He vomited once Saturday and twice on Sunday—an unpleasant experience even on earth and even worse in weightlessness where material floats around. Bean and Garriott also had problems. Space biomedics at the Johnson Space Center (JSC) in Houston prescribed motion sickness pills and quick head movements to assist the astronauts in adjusting to weightlessness. Both Lousma and Garriott took the pills—a combination of scopolamine and dexedrine that is supposed to block the nerve paths from the inner ear to the stomach. The head movements—30 to 40 per minute, three times a day—stimulate the three semicircular canals in the inner ear and



NASA

Skylab 2 crew off on 59-day stay.



help the body's vestibular adjustment.

While many astronauts have experienced some degree of stomach awareness and motion sickness in space, the prolonged illness of the Skylab 2 crew turned out to be a surprise. None of the three crewmen of Skylab 1 had experienced any sickness at all until they were back on earth, bobbing around in their spacecraft in the Pacific.

“The interesting thing,” said W. Ross Hawkins, chief of life sciences at JSC, “is that all three crewmen are sick. We have never had all three sick on any previous mission that I know of.”

Part of the problem could be related to prelaunch activities. This particular crew may not have had a chance to perform as many head exercises. None of the crew took the motion sickness pills before launch as other crews had. Scientifically it would be better not to take the pills to allow scientists to understand how and when the vestibular system finally adapts to weightlessness. But obviously, if the astronauts become ill, it is difficult for them to carry out a normal work day when a quick motion causes nausea. “It's a trade off,” Hawkins says. “[The pills] are definitely going to influence the data.” The feeling at JSC early this week was that the astronauts would soon be better and that the illnesses will not affect the