

tions of the energy crisis, for example.

Several studies in recent years had recommended a larger budget and an expanded role for OST, and as late as last fall there were reports that OST was going to be enlarged.

Despite their declining influence, both OST and PSAC have been major symbols of the prestige and importance of science at the highest levels of Government. The demise of OST, with its permanent staff and "White House" aura, is not an easy pill for scientists to swallow. Says one pro-Administration governmental source: "It was a good thing to do away with PSAC—it was a drag. But it was a mistake to do away with OST."

Still others point out that the restructuring, although probably of great long-range importance, is of less immediate concern to scientists in the United States than are the effects of Administration impoundments of already appropriated funds of science-based Government agencies (SN: 12/2/72, p. 358). Some of the program cutbacks resulting from these stringencies have already been announced (SN: 1/13/73, pp. 21, 22). Others so far have not. There are any number of horror stories around Washington about how drastic these effects—on oceanography, medical education, graduate training, physics research, to name a few affected areas—may be. The new budget and a forthcoming report promised Congress next week on the funds withheld may bring that situation into better light.

Meanwhile, the American scientific community is awaiting with no little trepidation further details of the restructuring and some means of assessing the expected effects on science. □

A last message from LBJ

The National Space Club's Salute to Apollo this week in Washington attracted many of the notables associated with the Apollo effort. But the reception had just begun when the 1,000-plus attendees learned of the death of one of the invited guests—former President Lyndon B. Johnson, who as chairman of the National Aeronautics and Space Council and later as President had been a strong early supporter of the space program.

The saddened audience was read the following message from Mr. Johnson, dated earlier that day:

Few restrictions on my time have troubled me more than those which prevent my being present at the . . . Salute to Apollo. Through this message, however, I would like to commend all those space pioneers who have made the Apollo miracle a living reality. It has been more, so much more, than an amazing adventure into the unexplored and the unknown. The Apollo program has been and will endure as a monument to many things—to the personal courage of some of the finest men our nation has produced—to the technological and managerial capability which is the genius of our system—and to a successful cooperation among nations which has proved to us all what can be done when we work together with our eyes on a glorious goal.

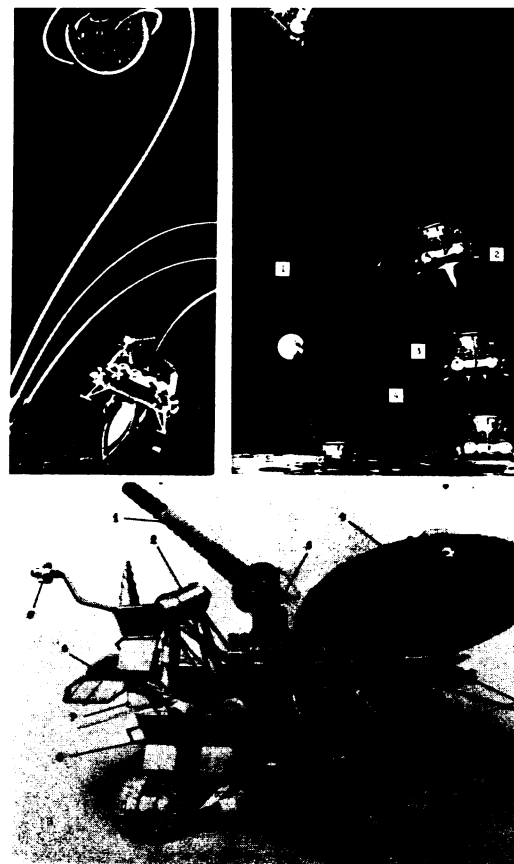
I rate Apollo as one of the real wonders of the world, and I am proud that my country, through the exercise of great ability and daring leadership, has given it as a legacy to mankind. My personal regards to all friends of Apollo.

Sincerely,
Lyndon B. Johnson

A roving lunokhod explores the moon

Soviet scientists are in the moon-business again—exploring a region just north of the Apollo 17 landing site. The unmanned Luna 21, launched by the Soviet Union Jan. 8, soft-landed on the moon Jan. 16 in the crater Le Monnier about 225 kilometers north of the Apollo 17 landing site. The moon-probe turned out to be another lunokhod, the second automated rover the Soviets have placed on the moon. Lunokhod 1 landed in Mare Imbrium in November 1970 (SN: 11/21/70, p. 397) and operated for 10 and one-half months traveling some 10 kilometers across the lunar surface.

Lunokhod 2 weighs about 1,800 pounds, 185 pounds heavier than its predecessor. It is equipped with a magnetometer, a television camera and a French "corner reflector" for laser measurements of the earth-moon distance. The rover also has instruments to test the density and mechanical properties of the soil as well as its chemical composition. The eight-wheeled rover resembles a bathtub (according to *Izvestia*) and has a wheel-base of a little more than seven feet. A. Gurshtein, a Soviet astronomer writing in *Pravda*, expressed confidence that the data from Luna 21 would supplement information gathered from the Apollo 17 mission. "Thus for the first time in the history of exploration of the moon, Soviet and American spacecraft have made soft landings so close to each other. . . . The experiment thus demonstrates once again that the exploration of the moon and of the planets of the solar system is now



U.S.S.R. Embassy

Lunokhod 2: A remote-control rover.

entering a stage in which coordination of efforts between countries is assuming increasing importance."

Le Monnier crater is 48 kilometers wide and lies on the boundary between Mare Serenitatis and the Taurus mountains. Television pictures showed a series of low peaks of the Taurus mountains on the horizon about six kilometers from the landing spot. The rover landed between two small craters in a smooth region inside the basin. In the foreground are small craters and massive rocks split in two. The photos show a hilly plain extending as far as the horizon.

During one of its first days of exploration, the lunokhod covered 1,148 meters in the course of six hours, moving southeastward toward the contact between the mare and the highlands, according to Tass. It was about 1,050 meters from the landing stage. There is some speculation that the Soviets may eventually guide the rover out of the crater toward the highlands.

On the second day of operation, ground controllers averted an accident. When the rover was initially activated, it headed straight toward the landing module, Luna 21, which had brought it to the surface. The operators managed to stop the rover in time to prevent a collision. Lunokhod then took pictures of the landing craft. Tass also reported that the soil over which the rover went was diverse in its mechanical characteristics. □