

laureates in past years. Almost simultaneously, it was disclosed by NIH that all three have been hit by the across-the-board reductions in research support. "We are not being able to keep what we have called over the years a moral commitment," an NIH spokesman says.

During the current fiscal year, Dr. Hershey, who has won NIH backing for 20 years, took a 10 percent cut in funds, from \$45,399 to \$40,860. Dr. Luria's grant was sliced nine percent, from \$60,731 to \$55,266 and Dr. Delbruck lost eight percent, from \$406,274 to \$373,760. Dr. Delbruck's funds are part of a large grant to several members of the faculty of Caltech while the other two scientists receive individual grants.

It also became known this week that Dr. Luria has been barred from serving on NIH grant review panels since his name was blacklisted in a procedure established during the McCarthy era. Several hundred scientists are so blacklisted, the journal *SCIENCE* has reported, for what was believed to be security reasons when the procedure was established. □

MARIJUANA

Administration about-face

When he was a candidate last year, President Nixon strenuously deplored the increasing use of outlawed drugs and promised that his Administration would initiate a stern crackdown on drug abuse. In the decade between 1958 and 1968 the number of drug arrests had climbed from about 10,000 to more than 160,000, and the proportion of offenders under 21 years of age rose from 14 percent to 56 percent.

It was obvious that new legislation was needed, if for no other reason than that the existing drug laws are in a state of confusion: The penalties for the illicit sale of LSD, for example, are considerably lighter than the penalties for selling marijuana, although LSD is considered a far more powerful drug. Moreover, the Supreme Court recently ruled that the Marijuana Tax Act, which is the principal Federal marijuana law, violates the Fifth Amendment by requiring unauthorized users of marijuana to incriminate themselves through payment of the tax.

The President's intentions during the campaign and his intentions at the present moment look quite different, though. The new Administration indeed initiated stern measures, but has now done a 180-degree turn. As originally introduced by the late Sen. Everett M. Dirksen, the Administration-sponsored drug bill included marijuana in the same category with heroin

and required mandatory minimum penalties of five years or \$25,000 for a first-offense conviction of possession. The strict penalties, however, were opposed by the Department of Health, Education and Welfare and the National Institute of Mental Health, and Sen. Thomas Dodd (D-Conn.), whose Subcommittee on Juvenile Delinquency heard testimony on drug abuse throughout the summer, sponsored a softer bill. In contrast to the Administration proposal, the Dodd bill contains no mandatory minimum penalties and suggested that judges grant probation to first offenders convicted of possessing marijuana.

The Dirksen proposals were categorically rejected by the scientific community (SN: 10/11, p. 350), and several months ago the Administration began to follow suit. It is now arguing for a drug bill which relaxes, rather than tightens, the present penalties.

Mr. Nixon's about-face began on a tentative note in September when Attorney General John Mitchell told the Subcommittee on Juvenile Delinquency that the Administration had merely followed the existing penalty structure in drawing up its bill. "This does not mean that there are not other equally reasonable alternative approaches," Mitchell said, adding that he "personally" was in favor of more flexible penalties. He made it clear that the Administration would not care if someone revised its bill.

No one did, but neither was there a storm of outraged public opinion following Mitchell's trial balloon. And this week Administration spokesmen returned with specific proposals for rewriting the law. On Oct. 14 Dr. Roger O. Egeberg, assistant secretary for health and scientific affairs at HEW, had testified that the Government had determined hallucinogens such as marijuana to be fundamentally different from narcotics; in any case, Dr. Egeberg pointed out, a law "making a large part of our population criminals by definition" would be nearly unenforceable. Then, on Monday, John Ingersoll, director of the Bureau of Narcotics and Dangerous Drugs, repeated Dr. Egeberg's contentions and advised the Dodd subcommittee that the Administration wishes to do away with the mandatory sentences for first-offense marijuana possession. Ingersoll recommended that marijuana no longer be considered in the same category as heroin, but be treated the same as amphetamines, barbiturates and other drugs which "normally lead to a moderate dependency."

The Administration still wishes to distinguish sharply between simple possession of illegal drugs and professional trafficking; in the latter case, and re-

gardless of the drug, according to Ingersoll, the offender should be locked up "for as long as rationally possible." Possession of marijuana with intent to sell can be penalized with a five-year prison sentence for a first offense.

Mr. Nixon has presented Congress with a variety of sentencing schemes, in varying degrees of severity, from which to choose.

The Administration also wishes to enable the Attorney General to reclassify marijuana as either more dangerous or less dangerous at some later date, and it intends to provide itself with grounds for altering the law by creating a commission to study marijuana under the auspices of the Department of Justice.

RUSSIAN SPACE STATIONS

Still in the future

More than 1,750 man-made objects are now in space. Most are junk—burned-out rockets and fragmented debris—while more than 400 are operational sky-spies, weather-watchers, research probes and other devices.

Conspicuously absent from the inventory, however, is a device that could become a keystone of future space efforts: a permanent, or long-life, space station.

Practically every visionary anticipation of a full-flowering Space Age has envisioned some kind of large, orbiting facility for tasks ranging from servicing recalcitrant satellites to launching manned flights to distant planets.

The U.S. Gemini and Apollo programs have demonstrated the necessary docking techniques for assembling modular equipment in orbit; in January the Russians followed suit by coupling and jointly maneuvering the manned Soyuz 4 and 5 spacecraft, adding a spacewalk from one craft to the other that could have represented a repairman trouble-shooting an orbiting platform.

Last week, a troika of Soviet spacecraft seemed ready to take the next big step: the joining in space of three separately launched pieces of equipment (SN: 10/18, p. 347). As the week ended, however, so did hopes for the triple coupling. One by one on succeeding days, in the same order in which they were launched, Soyuz 6, 7 and 8 returned to earth, their main mission apparently unfulfilled.

For the U.S., a three-way docking ought not present any major technical hurdles—the entire Gemini program was largely devoted to learning how to bring spacecraft together in orbit. Russia has two automatic unmanned dockings to her credit, as well as the one manned maneuver. "Plugging three

ships together shouldn't be much harder than two," says a National Aeronautics and Space Administration official, "but somebody has to do it."

The three spacecraft were far from failures, however. Soyuz 6 studied the potentials and problems of welding in space, probably based on Soviet research into cold diffusion welding, a spontaneous phenomenon that occurs when surfaces in contact in high vacuum fuse by an exchange of electrons. Predictable cold welds could offer a valuable technique for manufacturing in space, and are planned for study in the Apollo Applications Program. Soviet scientists indicated that the welding tests, involving several pairs of materials, were an important step toward a permanent station, since mechanical couplings, such as those made in docking, would be only temporary.

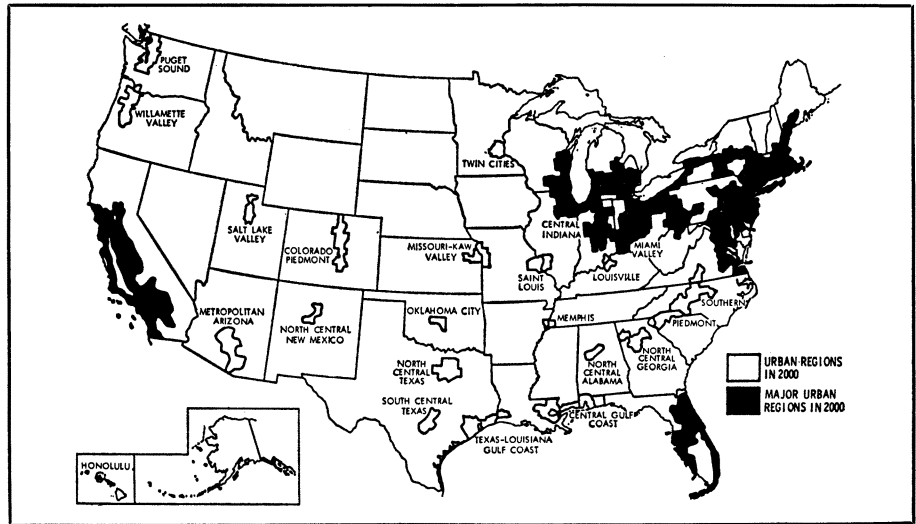
Earth-resources photography, similar to that performed by U.S. spacecraft, was carried out from one or more of the vehicles. Most of the interest was centered on the region between the Caspian and Aral Seas in Russia north of Iran, with an aircraft covering that area to provide comparison data from lower altitude. Besides observing geological formations, the cosmonauts observed and photographed cloud formations.

From less than 1,500 feet apart, Soyuz 7 and 8 performed several hours of detailed star sightings and earth landmark tracking exercises. Visual acuity tests were conducted—U.S. astronauts have reported seeing objects as small as railroad trains from orbital heights—and detailed biomedical data, possibly more elaborate than that on Apollo, was telemetered to earth from all seven cosmonauts in the three spacecraft. Russian researchers have reported more biomedical difficulties from space flight than have their U.S. counterparts, including difficulties with balance reportedly encountered in every Soviet mission.

Other experiments included micro-meteoroid flux measurements and manual performance of formerly automatic navigation functions. The latter is in contrast to the Soviet view in pre-Soyuz days that the ideal cosmonaut would be a full-time researcher in a fully automatic spacecraft.

But the space station remains in the future. U.S. plans call for the Apollo Applications stations by 1972, with maximum stays of 56 days, and a relatively permanent station four years later. Soviet plans do seem to be oriented to orbiting stations, possibly at the expense of manned interplanetary flights, but until more successful flights are in the Russian books, the timetable remains unknown.

Bare-bones program



Coastal problems, coastal states: Targets for priority oceanographic effort.

Since coming into power in January, the Nixon Administration has been reviewing ideas and proposals for a national policy in marine affairs.

Facing the President when he took office were the some 120 recommendations of the Commission on Marine Science, Engineering and Resources (SN: 2/1, p. 111), covering everything from the management of coastal areas and the development of fish and mineral resources to basic research in oceanography and the improvement of technical and operating services. In addition, the commission called for a National Oceanics and Atmospheric Agency, and, as all official Washington knows, any such proposal threatening the domain of present agencies faces a long and difficult trail toward acceptance (SN: 10/11, p. 325).

But some things can't wait. This week the Administration announced the selection of five areas of marine science activity that it says are too important to await the development of a long-range program. They will comprise an interim program that will be given immediate special emphasis in the next fiscal year.

The five areas:

- **Coastal zone management:** A program of Federal grants would be set up to aid the states to plan and manage activities along coastal areas and the Great Lakes.

- **Coastal laboratories:** to accelerate environmental research needed for effective management of coastal activities.

- **Lake restoration:** to test the technological feasibility of restoring the Great Lakes. A pilot study will be conducted on some still-unselected lake of manageable size, slightly more than

100 square miles.

- **International Decade of Ocean Exploration:** The United States will contribute to the project and will suggest emphasizing six international goals; the primary one is to "preserve the ocean environment by accelerating scientific observations of the natural state of the ocean and its interactions with the coastal margin."

- **Arctic environmental research:** The oil rush on the North Slope of Alaska (SN: 9/27, p. 265) stimulated this phase of the program, which will aim at developing the region without degrading the Arctic environment.

"This is the Administration's view of those areas that are in the first order of priority," says Dr. Edward Wenk Jr., executive secretary of the National Council on Marine Resources and Engineering Development.

"These are the areas where there is a clear and present danger." He estimates the cost of the five projects at \$25 million to \$30 million in fiscal 1971, all of it on top of the approximately \$500 million now being spent on Federal marine science activities.

The new program is strongly oriented to the management and protection of coastal and inland waters. The United States' coastlines extend a total of 13,000 miles, and one forecast is that, by the year 2000, 75 percent of the nation's population will live in counties along the sea coasts and Great Lakes.

From these shallow waters, man draws much of his sustenance. The problem is that they are ecologically fragile, and man has been slow to realize it. "There has been a long neglect of the coastal zone," says Dr. Wenk. "Each man wants to do his