

## SPACE

# Military Astronauts

► EIGHT TEST PILOTS have been chosen for a training program designed to develop future military "astronauts."

The group will participate in an eight-month course at Edwards Air Force Base, Calif., to train for future aerospace projects such as the X-15, Dyna Soar and other follow-up space programs.

They will be assigned to special projects as they get under way. The students selected average 30 years in age and have a degree either in engineering, physical sciences or mathematics. They are also graduates of either the Air Force, Navy or Empire Test Pilot's Schools. The latter is a test-pilot school of the United Kingdom Royal Air Force with which the United States has an exchange agreement.

The eight test pilots will form a pool from which future space pilots, engineers and managers for military aerospace programs may be drawn.

The curriculum combines classroom instruction and laboratory work. Subjects range from Einstein's theory of relativity to trajectory and orbital mechanics. The laboratory instruction includes work in computer techniques, orbital rendezvous, mechanics of space-simulated flights, life systems investigations, and flight in high-altitude and high-speed aircraft.

The laboratory work will be done at Edwards Air Force Base; Naval Air Development Center, Johnsville, Pa.; Brooks Air Force Base, Texas; Ling-Temco Vought, Dallas; and Griffith Observatory, Los Angeles.

The test pilots are actually the second group to participate in the program. The first class that recently graduated will instruct the new military "astronauts."

The new group includes Capt. Albert H. Crews Jr., Alexandria, La.; Capt. Charles C. Bock Jr., Seattle, Wash.; Capt. William T. Twinting, Chicago, Ill.; Capt. Robert W. Smith, Washington, D. C.; Maj. Donald M. Sorlie, Fargo, N. Dak.; Capt. Robert H. McIntosh, Baltimore, Md.; Maj. Byron F. Knolle, Houston, Texas, all of the Air Force, and Navy Lt. Cmdr. Lloyd N. Hoover, Wilbraham, Mass.

Four are Korean War aces, two hold master's degrees in aeronautical engineering. All underwent physiological and psychological tests to determine character, motivation and emotional factors at the School of Aerospace Medicine, Brooks Air Force Base, Texas.

None of them are expected to participate in the civilian space program, which includes Project Mercury.

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## PUBLIC SAFETY

# Safety From Fallout Urged

► THE URGENT NEED for countermeasures against radioactive fallout from atom-bomb tests as well as from other man-made radiation is underscored in a new report by the National Advisory Committee on Radiation (NACR) expected to be released by the U. S. Public Health Service soon, SCIENCE SERVICE learned.

The report was made at the request of Secretary of Health, Education and Welfare Abraham Ribicoff who, through the Surgeon General of the Public Health Service, asked the NACR to make recommendations for the improvement of radiation safety for the general population and for those working more directly with nuclear energy.

Practically no countermeasures have been undertaken to overcome radiation hazards by the United States or, indeed, by any other of the world's atomic powers, the report states. It was unanimously endorsed by 13 authorities in the field of radiological health who comprise the Committee.

Dr. Russel Morgan, chairman of the NACR and chief of the division of radiobiology at Johns Hopkins University, observed in an interview that many national and international committees on radiation protection have spoken at considerable length about radiation hazards while saying "practically nothing" on how to handle these hazards.

"In my opinion," Dr. Morgan stated, "the

United States will have to take the leadership to protect public health here and elsewhere in the world."

The problem of eliminating radiation contamination from foods demands immediate study even though present levels in foods are considered acceptable by public health authorities, he said. Currently there is no place in this Government or in the world where a special group is directed to such research.

The NACR report urges that such research be undertaken by Federal authority while the need for countermeasures is not vital so that they may be ready for any emergency situation.

Milk is the only food that has been intensively studied for removal of radiation contamination. This effort, however, is largely limited to a single pilot plant at Beltsville, Md., for the removal of strontium-90 from milk.

Strontium-90, a product of fallout from nuclear bomb tests, is a known cause of bone cancer and leukemia. It tends to accumulate in food rich in calcium. Grain cereals are among the calcium-rich foods. Cereals deliver as much strontium-90 as milk, according to Dr. Morgan, yet no research is directed at fully eliminating this contamination from grains. Studies have shown that contamination can be reduced, however, by refining the grains.

Dr. Morgan recommended that a strong central authority be established to regulate all atomic activities and to both set and enforce standards particularly with regard to health and safety. No such authority now exists. The Federal Radiation Council makes recommended standards but lacks the authority to enforce its recommendations. Dr. Morgan envisions a Federal Radiation authority that will not only recommend standards or guides but will have the authority to enforce them.

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## GENERAL SCIENCE

## Lowest Forest Fire Loss Recorded in 1961

► THE NATION chalked up its lowest forest fire loss record in 1961, cutting nearly 5,000 fires off the 1960 total.

The number of acres lost to fires last year was only slightly over 3,000,000, as compared to nearly 5,500,000 in 1960, the American Forest Products Industries announced in Washington, D. C.

Man caused at least 85% of all forest fires, however. Trash burners were among the leading offenders, even with the efforts of Smokey Bear and industry's Keep America Green warnings.

Aside from recreation and wildlife purposes, damages were economically staggering. Each time a forest fire started, an average of 32 acres of woods were lost, enough timber to build 75 homes.

Florida, Oklahoma and California were the biggest losers, with 750,000 acres lost in Florida alone last year.

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**RADAR TUBE PROTECTOR**—Performing the same job as a lightning rod on a home or a barn, a crowbar discharge switch developed by the Westinghouse Electric Corporation, Bloomington, Ind., protects expensive high powered radar tubes from damage. The switch will respond in eight millionths of a second.