



AEROBEE-HI—This single stage "boosted" rocket is one of more than 40 sounding rockets being launched during the International Geophysical Year. Aerobee-Hi, produced by Aerojet-General Corp., Azusa, Calif., is shown being thrown spaceward from an especially constructed "igloo" at Fort Churchill, Canada. It holds an altitude record of 193 miles.

ENGINEERING

Uranium-Bearing Sludge Recovered From Storage

See Front Cover

► THE COMPLETION of a salvage job that will provide many tons of critically needed uranium has been announced by General Electric Company, operator of the Atomic Energy Commission's Hanford plant in Richland, Wash.

The uranium had to be extracted from the highly radioactive materials with which it was stored in underground waste storage tanks. Some of the material, stored since World War II, had settled as sludge. Engineers broke up the hard deposits with streams of water from high pressure hoses so that it could be pumped out.

During the salvage work radiation from the tanks handicapped the entire operation. Periscopes, as shown on the cover of this week's SCIENCE NEWS LETTER, were inserted into the tanks so that the progress of the sluicing operations could be observed. Rigid standards of safety were maintained to protect workers from radiation.

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RADIO

Saturday, Sept. 14, 1957, 1:45-2:00 p.m., EDT "Adventures in Science" with Watson Davis, director of Science Service, over the CBS Radio Network. Check your local CBS station.

Dr. Floyd S. Daft, director of the National Institute of Arthritis and Metabolic Diseases, National Institutes of Health, Bethesda, Md., will discuss "Arthritis and Metabolic Diseases."

MEDICINE

'57 Flu Cases Unlike 1918

► THE INFLUENZA epidemic threatening to hit the U. S. this fall will not be very much like the deadly one that killed more than 500,000 Americans during the winter of 1917-18, Dr. C. C. Dauer, chief of the influenza reporting center, U. S. Public Health Service, Washington, told SCIENCE SERVICE.

"We cannot assume that the same thing is going to happen this time," he said.

About the only similarity between the two is that there were isolated outbreaks of the illness during both the summers preceding the mass outbreaks.

The present epidemic has been watched and much more is known about it than was ever known about the 1917-18 epidemic.

There were no facilities at that time to identify the various types and strains of virus that can cause influenza. Even now, researchers are not sure which one actually caused the earlier epidemic. (See p. 152.)

It appeared to spring up in many parts of the world at the same time, rather than start in Asia and circle the globe as the present one is doing.

The antibiotics now available will make a big difference in the death rate from complications following flu, but they may not be the cure-all many people expect them to be.

It all depends on what bacteria cause the pneumonia often following influenza, since some are resistant to the newer drugs.

Pneumonia can be caused by several or-

ganisms, particularly staphylococcus, streptococcus, and pneumococcus. The streptococcus and pneumococcus organisms can be arrested with antibiotics, but the staphylococci frequently are resistant to them and thus create much more serious, and difficult to treat, illnesses.

What type pneumonia an individual may get depends on which bacteria happen to be prevalent in his area at the time.

So far there have been a few reported deaths from staphylococcus pneumonia developing after a flu attack, Dr. Dauer said.

The rush for influenza vaccine is on now, but people may have to be urged into getting their shots after the first scramble, Dr. William D. Stewart, assistant to the Surgeon General, U. S. Public Health Service, told state and territorial health officers meeting at the National Institutes of Health, Bethesda, Md., to discuss the flu situation.

Polio vaccine experience has shown people do not readily bare their arms to the needle unless constantly reminded of the importance of doing so, he told the health officials.

Encouraging people to get vaccinated and keeping up their desire to do so until the vaccine can be supplied may be a tough job for all health departments.

The public needs to know there is not going to be enough vaccine for everybody for a while and those who take care of the sick or provide essential community services should get the vaccine first.

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EDUCATION

Russian in High School

► RUSSIAN has been selected as the second most important scientific language by one of England's new secondary technical schools.

School authorities advised parents of students at the Hatfield School, near London, that the first language for youngsters receiving heavy science instruction should be German. Even this first language choice was a departure from tradition, as French had been the first foreign language for the older grammar schools.

In making the second choice, parents saw the value of breaking with tradition even further when they selected the language which opens Soviet science to their children.

Hatfield School is only three years old. The technical schools are the newest of the three-part secondary school system of Britain. Secondary education includes youngsters from the ages of 11 to 15. The oldest of the secondary schools are the Grammar Schools which are college preparatory and academic. "Grammar" in England means Latin grammar and the curriculum is strong in the classics. Competitive examinations select the top 20% of the 11-year-olds who enter the grammar schools. The majority of English children attend secondary modern schools which have developed since World War I.

The Education Act of 1944 brought about

England's newest state-supported schools, the secondary technical schools. Like the grammar schools, these are selective in their enrollment. They differ from the grammar schools in replacing classics with science emphasis, and bear a relationship to the industry or commerce of the neighborhood. A broad program, however, prevents their providing a narrowly vocational training.

The development of the technical school is coupled with the growing importance of technicians in English industry. Britain, as well as the United States, has a grave shortage of engineers, who have attended the grammar schools and go on to the universities.

The graduates of the technical schools usually go to work after completing their secondary education and their military service. But reaching the legal age for leaving school, now 15 but in the process of being raised to 16, does not mean the end of education for most of them. Many take further education one day a week at the county colleges on time released by their employers. The large enrollments of these free schools is closely tied to England's efforts to raise the compulsory school age to 16 as soon as staff and facilities are sufficiently increased.

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