

## MEDICINE

# Vaccine Crash Program

Drug companies are preparing for the influenza epidemic that will probably sweep the country this fall and winter. Production of vaccine is being intensified.

## See Front Cover

► THE PUBLIC Health Service has asked the nation's six producers of flu vaccine to have at least 60 million doses ready by February 1.

An influenza epidemic that will sweep the U. S. from coast to coast is a definite probability and the vaccine is the only preventive measure that exists, Surgeon General Leroy E. Burney of the Public Health Service said.

The drug companies have gone on a crash program with two or three production shifts working seven days a week to get the vaccine ready. They expect to have eight million doses ready by mid-September but half of these have been ordered by the military.

There has already been wide "seeding" of the population with the new Asian strain of the virus and explosive outbreaks this fall and winter will probably occur.

There will not be enough time to produce the vaccine and immunize a majority of the population before the influenza season, but "we want to make the best use of it we can," Dr. Burney said.

With an attack rate of 10%, which is lower than that experienced by some Far Eastern areas, the epidemic's effect on the nation could be considerable, he added.

"We think we will have sufficient time beginning in September to insure that all those who want the vaccine injections will be able to get them," he said.

But other experts admitted there was no way of telling whether the peak of the epidemic would hit in October or not until February or March.

If an epidemic does hit, it could spread from San Francisco to Boston in a period as short as four weeks. There is no effective treatment for the illness and antibiotics are powerless against the flu itself. They are, however, effective in combating the bacterial "hitch hikers" which cause infectious complications.

The Public Health Service will not establish priorities for the available vaccine.

It will, however, strongly recommend that such priorities be set up by the American Medical Association and local, state and territorial organizations.

Immunization priority should go to the three million or so people engaged in health services as well as another nine million people who are in such necessary jobs as communications, transportation, utilities, food processing and distribution, law enforcement and the like.

After that, the very young and the very old, who are more apt to develop complications, should get priority, Dr. Burney said.

Hundreds of thousands of fertile eggs are now being consumed each week by the nation's leading producers of flu vaccine.

They are being injected with live Asiatic-type flu virus and then milked for a vaccine that may be necessary to halt a country-wide epidemic of flu this fall.

Although the exact egg count is a trade secret among the drug companies in the business, one of them, the National Drug Company, Philadelphia, admitted they were using "well in excess of 100,000 eggs every week."

The photograph on the cover of this week's SCIENCE NEWS LETTER shows how, with a special hypodermic syringe, each egg is inoculated with a pre-measured amount of influenza virus. The tops of the eggs are treated with iodine to make them aseptically clean.

The eggs must all be fertile with 10- or 11-day-old chicks inside, and most of them are coming from commercial supply houses that specialize in them.

The cost to the physician will be about one dollar per shot of the polyvalent vaccine, while the monovalent will be a little cheaper, the National Drug Company said.

Polyvalent vaccine protects against several other strains of flu as well as the Asiatic one, while the monovalent type is effective only against Asiatic virus.

Another manufacturer, Merck Sharp & Dohme, Philadelphia, said they would probably not have the vaccine ready until late September. They had intended to produce the polyvalent type but have recently decided to make only the monovalent.

One disadvantage of the polyvalent vaccine, a company spokesman said, is that it requires a greater concentration of each single type of vaccine than is needed for a monovalent vaccine. This happens because each vaccine type becomes more diluted after it is added to others.

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## PHYSICAL CHEMISTRY

### Element 102 Christened Nobelium

► THE WORLD'S newest element, atomic number 102, has been christened nobelium, with No as its chemical symbol. (See SNL, July 20, p. 35).

This designation was made official by the Commission on Nomenclature for Inorganic Chemistry of the International Union of Pure and Applied Chemistry at its recent Paris meeting. The Commission's chairman is Dr. Alexander Silverman, professor emeritus at the University of Pittsburgh.

Two elements were given new symbols, Dr. Silverman also reported.

Einsteinium, a man-made element named after the late Albert Einstein, atomic num-

ber 99, will henceforth have Es as its symbol. Argon, a noble gas of atomic number 18, will have Ar as its symbol. This has been used by other countries with the exception of the United States. The U. S. has used A until now.

Dr. Silverman said in the future new elements will always have a symbol of two letters, consisting either of the first two letters of the name, or the first letter in both the first and second syllables.

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## GEOPHYSICS

### U. S. Plans to Launch "Baby" Earth Satellite

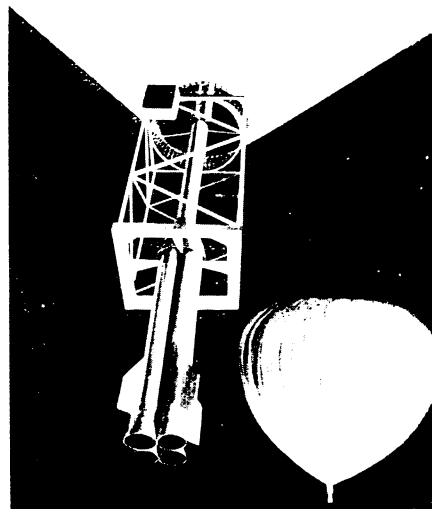
► THE UNITED STATES plans to launch a "baby" earth satellite only 6.4 inches in diameter in November as part of the test program leading to firing fully instrumented 20-inch spheres into space next spring. (See SNL, July 6, p. 10.)

The "test satellite" will weigh about four pounds, compared to the 21.5 of the 20-inch versions. Its only equipment will be a tiny radio transmitter so it can be tracked.

The moonlet will be shot into space by rockets from Cape Canaveral, Fla., from where the larger ones will also be launched. It is not expected to stay in orbit more than about two weeks.

Both the launchings of the "baby" version and the larger satellites are part of the International Geophysical Year.

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**ROCKET VEHICLE**—At the launch altitude for the Far Side rocket vehicle, developed by Aeronutronic Systems, Inc., Los Angeles, the 3,750,000-cubic-foot balloon is fully inflated to its maximum diameter of 200 feet. The full view of the complete assembly shown at the lower right gives an idea of its comparative size. The balloon launching is being made in an effort to free rockets from the high friction of lower atmosphere and to preserve their power for outer space.