GENERAL SCIENCE

Talent Search Underway

To find the 40 high school seniors most likely to succeed in science careers, the Sixteenth Annual Science Talent Search is now launched. Closing date is Dec. 27.

➤ A NATION-WIDE search is now under way to find the 40 most promising science-minded high school seniors in the country.

The Sixteenth Annual Science Talent Search was launched with an invitation to seniors in 27,000 public, private and parochial schools throughout continental U.S.A.

They will have the opportunity to compete for a five-day visit to Washington and $11,000 in Westinghouse Science Scholarships. Valuable honorable mention status will go to 260 others. The results of the Search will reveal who among this year's seniors will be the nation's leading scientists of the future, and will stimulate others to undertake scientific training.

The Science Talent Search is conducted by SCIENCE SERVICE and supported by the Westinghouse Educational Foundation. Watson Davis, director of SCIENCE SERVICE, in announcing this year's Search, called attention to the growing shortage of scientists and engineers, a shortage that hampers the nation's industrial and defense programs.

Principals and science teachers in secondary schools throughout the country are now receiving instructions on "How You Can Search for Science Talent." They will learn how to recognize science talent among their students and to encourage those students to enter the Sixteenth Annual Science Talent Search.

Materials Sent Soon

They will send for, and after Nov. 15 receive, about 25,000 sets of entry materials, so qualifying seniors can enter the competition for the trips and $11,000 in scholarships. The thousands of seniors will comply with all requirements for entry in their own schools.

From the 25,000 entries, it is estimated about 4,000 will complete all entry requirements. Of these, 40 will be named as national winners and will receive five-day, all-expense-paid trips to Washington, to attend the Annual Science Talent Institute.

Another 260 will be named for honorable mention. All 300 will be recommended to colleges, universities and technical schools of their own choice.

As in the past, it is expected all will receive offers of financial assistance for college education from other sources on the basis of this honor. Many of the 40 winners of 1956 were offered as much as $30,000 in scholarships.

To comply with entry rules, each contestant must take a two-and-one-half-hour science aptitude examination in his own school, submit personal and scholastic records, and write a report of about 1,000 words on "My Scientific Project." The examination may be taken between Dec. 3 and Dec. 27.

All entries must be in the offices of SCIENCE SERVICE by midnight, Thursday, Dec. 27, when the competition closes.

Winners and honorable mentions will be announced late in January, 1957, and the 40 winners will come to Washington, D. C., from March 7-11, 1957.

After five days of meeting the nation's outstanding scientists, of learning about the latest developments in science and of visiting places of historic and scientific interest, the winners will receive scholarships ranging in size from $100 to $2,800.

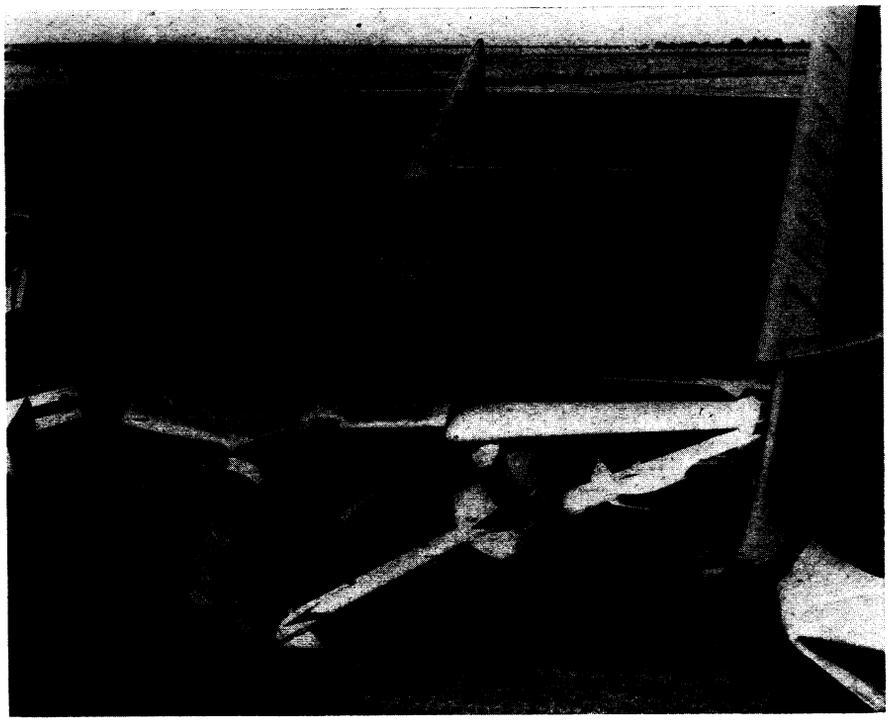
How well the Science Talent Search has been able to replenish the much needed supply of scientists is illustrated by a survey of the present careers of the 600 young men and women (from 15 to 33 years of age) chosen in the first 15 years (1942-56) of the Search: All are in or have attended college. With very few exceptions, they advance to a bachelor's degree, and more than 50% of those old enough already have a doctor's degree.

Colleges Are First Choice

Careers as teachers and researchers in colleges and universities rank first in choice. Industry has taken the second largest number of the winners now working full time. The highest reported salary is more than $13,000. A smaller number are in Government employment. Those self-employed are relatively few—most of them physicians in private practice.

Service in World War II cut in heavily on the time of the winners from 1942-45 and consequently delayed the careers of most of the men in those years. Winners of later years have been fortunate in receiving draft deferments in order to continue their education. Of the men now serving in the armed forces, most are serving in the line of their completed training.

Many of the women who have been named winners in the 15 years of the STS



"SIDEWINDER" MISSILE — A lightweight but deadly air-to-air guided missile is the "Sidewinder," now being produced for the Navy Department by Philco Corporation. The name is derived from the term commonly used in the Southwest for particularly vicious rattlesnakes. Small and light enough to be carried in quantity by single-seat interceptors, the missile may be fired singly or in salvos. It will also be used by the Air Force.

now are married—most of them to scientists or engineers. Homemaking and child care occupy the full time of a good share of these women. The rest combine marriage with their careers.

The judges of the Science Talent Search are Dr. Rex E. Buxton, Washington psychiatrist; Dr. Harold A. Edgerton, vice-president, Richardson, Bellows, Henry and Co., New York City, and Dr. Steuart H. Britt, vice-president and director of research, Needham, Louis and Brorby, Inc., Chicago. The latter two have designed the science aptitude examination for each of the Science Talent Searches.

High School seniors in some states will have a double chance to win scholarships through state Science Talent Searches run concurrently with the national competition and by special arrangement with Science Clubs of America.

In 1957 the following states will hold these competitions: Alabama, Arkansas, Connecticut, District of Columbia, Florida, Georgia, Illinois, Indiana, Iowa, Kansas, Maine, Maryland, Massachusetts, Michigan, Minnesota, Montana, New Hampshire, New Mexico, North Carolina, Oklahoma, Pennsylvania, Rhode Island, South Carolina, South Dakota, Tennessee, Texas, Utah, Vermont, Virginia, West Virginia and Wisconsin.

For complete details of the national and state Science Talent Searches, write to Science Clubs of America, 1719 N St., N.W., Washington 6, D. C.

Science News Letter, November 3, 1956

CHEMISTRY

Next: Four New Elements

➤ ELEMENTS up through 105 may be created and identified in the next few years. These elements probably existed at the birth of the earth but, decaying through radioactivity, became extinct within minutes or seconds.

The hopes for recreating, briefly, these extinct "dinosaurs of matter" were described by Dr. Glenn T. Seaborg, the University of California Nobel Laureate who is the co-discoverer of plutonium, element 94, and all the heavier synthetic elements up through 101.

In the G. N. Lewis Memorial Lecture, Dr. Seaborg reported in detail for the first time some of the predicted chemical and radiation properties of undiscovered elements up to and including element 105, as well as how he and his colleagues hope to make them.

Dr. Seaborg said only 17 atoms of element 101 were identified in the discovery experiments. Higher in the periodic table, even fewer atoms can be made and they decay more quickly, reducing chances of identification.

Dr. Seaborg and his colleagues hope to overcome these problems chiefly in two ways:

1. By using an atom smasher called the heavy ion linear accelerator, or "Hilac," built with Atomic Energy Commission funds.

2. By keeping alert for unusual isotopes of the ultra-heavy elements.

With the new atom-smasher, the scientists will hurl the nuclei of atoms as heavy as argon, element 18, at target nuclei. In the past, the usual projectile has been the alpha particle, the nucleus of helium, element 2.

With the bigger projectiles, larger yields of the still undiscovered elements are expected, making identification possible.

Identification of elements through 105 may take five to ten years, Dr. Seaborg said.

In the more distant future, he said, elements from 105 through 108 might be identified by their characteristic radioactivity.

The scientist predicted element 102 will be chemically like ytterbium, element 70; element 103 like lutetium, element 71; element 104 like hafnium, element 72; element 105 like tantalum, element 73; 106 like tungsten, element 74; element 107 like rhenium, element 75; and 108 like osmium, element 76.

Science News Letter, November 3, 1956

ELECTRONICS

Univac Given To Harvard University

➤ A TWIN to the giant electronic "brain," the Univac that will forecast this year's election results on the basis of the first scattered returns, has been presented to Harvard University.

The $1,500,000 gift from the Sperry Rand Corporation will be used to spur research in such fields as language study, physics, astronomy and economics. It will join a team of big machines now operating in the Harvard Computation Laboratory.

Science News Letter, October 27, 1956

MEDICINE

Relaxing Drugs Will Cause Great Change

➤ RELAXING, or tranquilizing, drugs will change the mental disease picture in the next ten years as much as the antibiotics, or so-called mold remedies, have changed the germ disease picture in the past 15 years.

This prediction was made by Dr. Felix Marti-Ibanez, medical editor and professor of history of medicine at New York Medical College, Flower and Fifth Avenue Hospitals, New York, at the Fourth Annual Symposium on Antibiotics in Washington.

The symposium is sponsored by the U. S. Food and Drug Administration in collaboration with the journals, *Antibiotics and Chemotherapy* and *Antibiotic Medicine and Clinical Therapy*.

In the years since the first of these symposiums, 43 new antibiotics have been announced, to say nothing of the many others since the discovery of penicillin in 1928 and its first use on patients in 1940.

The field of antibiotics has grown so, Dr. Marti-Ibanez said, that the pharmaceutical industry should set up an International Institute of Antibiotics and should establish "chairs," or professorships, in antibiotic medicine in various countries of the world.

Science News Letter, November 3, 1956