GENERAL SCIENCE

STSers Witness NBS Move

The STS winners observed the transfer of the national standards for the meter and kilogram to the new site of the National Bureau of Standards in Maryland.

See Front Cover

➤ THE NATIONAL Bureau of Standards' vault was opened on March 3 to transfer the national standards for the meter and kilogram to the new NBS installation in Gaithersburg, Md. Some top-rated high school scientists, winners in the 25th Science Talent Search, witnessed the event, an unusual privilege as only one key to the vault exists and even authorized personnel must register to remove or deposit standards for use.

Secretary of Commerce John T. Connor and Dr. Allen V. Astin, director of the Bureau, officiated at the vault-opening in Washington, D.C. Dr. Astin took the standard meter and kilogram to Gaithersburg. Dr. Donald F. Hornig, Special Assistant to the President for Science and Technology, participated in the ceremonies at the new vault.

Seen on this week's front cover are Secretary Connor, above the standards encased in glass, while Dr. Astin stands at his right and Dr. A. V. McNish of the Bureau is in the foreground at his left. The STSers look on interestedly.

The meter and the kilogram are not the only things being moved. The whole Bureau is being transferred lock, stock and standards to long-overdue new headquarters on land that was bought for the purpose a decade ago.

The site covers 560 acres, on which 15 buildings now stand. Several of the NBS laboratories have already moved into their new homes. One of these, the Radiation Physics Laboratory, houses LINAC, a 100-foot-long, 100-million-volt electron accelerator capable of producing one of the world's most intense high-energy electron beams.

A new addition to the NBS facilities will be a 10-megawatt nuclear research reactor, scheduled to begin full power operation by the end of June. Another newcomer will be the world's largest testing machine, a 12-million-pound compression and tension tester, which will require almost six months for complete installation and testing.

An outdoor addition will be "Newton Two," one of two authentic grafted descendants of Isaac Newton's English apple tree. Newton One will remain at the old NBS site.

Following the ceremonies, the aspiring young scientists visited Bureau of Standards laboratories, where they observed, and discussed with scientists such procedures as field emission spectroscopy, photo-detachment of negative ions and ultra-trace analysis. A tour is arranged each year for the top winners of the Search.

• *Science News, 89:163 March 12, 1966*

GENERAL SCIENCE

Winners Favor Teamwork

➤ THE NATIONAL Bureau of Standchance of solving the urgent problems now facing scientists, in the opinion of some highly promising future scientists.

Asked whether the team approach helps or hinders contributions to science, the 40 top winners of the 25th Science Talent Search for the Westinghouse Science Scholarships and Awards, conducted by SCIENCE SERVICE, indicated that they were overwhelmingly impressed by the results of pooling specialized training and setting the stage for creative interaction among scientists. Of the 39 outstanding high school seniors who answered the question, 33 felt that the complexity of modern science has made the group approach essential.

However, four of the winners believed that such teamwork limits individual contributions, personal recognition and the complete control of methods that might yield superior results. Two students took their stand in the middle, suggesting that particular circumstances of the research problem or the personalities of scientists involved should dictate the individual or team approach. As a matter of fact, nearly all those who enthusiastically endorsed the team idea added some "on the other hand" thoughts emphasizing the necessity of solitary, undistracted research on occasion.

The problems these potential scientists consider most urgently in need of answers are hunger and exploding populations; unconquered disease and other medical conundrums such as the regeneration of damaged organs or the conquest of negative reactions to organ transplants; the nature of life, earthly and extraterrestrial intelligence (if any) and the origin of the universe; and the communication of knowledge and ideas among scientists and between the scientific community and the lay public.

An Arizona boy believes our most fundamental need is the understanding and synthesizing of organ compounds so materials can be designed and produced to order. The proper use of computers as "helpful" rather than "necessary" tools concerns a 16-year-old Pennsylvanian, while a Louisiana boy feels that science must devise a way to educate all of mankind, since ignorance will ultimately block all progress. This 17-year-old comments that, "The masses of uneducated or poorly educated become an environment which stifles originality, answers problems with superstition and makes man a prisoner of natural forces rather than the free spirit he aspires to be"

The 40 aspiring young scientists, 11 girls and 29 boys, formed an unusual team of their own when they arrived at Washington from their homes in 37 cities in 20 states for the Science Talent Institute, March 2 through 7. Their full schedules included specially arranged trips to laboratories in the Washington area, visits with eminent scientists and judging sessions for the five Westinghouse Science Scholarships ranging from $7,500 to $3,000.

• *Science News, 89:163 March 12, 1966*

GENERAL SCIENCE

Train U. S. Officials In Scientific Policies

➤ A NEW PROJECT for training Foreign Service Officers in United States scientific policies was launched by the Government.

The plan is to have State Department representatives learn more about U.S. science programs and the problems encountered administering them.

The project is patterned after the successful exchanges already made between the State Department and Department of Defense through which individuals become acquainted with the particular problems faced by another Government agency.

In addition to the State Department and AEC, the National Science Foundation, and the Environmental Science Services Administration of the Department of Commerce are cooperating in the exchange program, inaugurated at ceremonies at the State Department on Feb. 28.

• *Science News, 89:163 March 12, 1966*

TECHNOLOGY

Automated Libraries Give Answers on TV

➤ AUTOMATED LIBRARIES capable of supplying information and selected book passages on the home television screen are on their way.

Predicted by William Hammond and Richard P. Daly, of the Aries Corporation, a national management consulting firm, the libraries may not reach the public for five or ten years, but they are technically feasible now.

Besides supplying students at home with whatever information they need in response to a simple telephone call, automated libraries could benefit the classroom. Equations and illustrations from experts in a given field could be made available to any classroom at the flick of a TV switch. Passages from reference books could be similarly available on the library console.

• *Science News, 89:163 March 12, 1966*