

GENERAL SCIENCE

Science Scholarship Winners

A gifted high school student who plans a future as a research physicist was awarded the grand Westinghouse Science Scholarship of the 23rd Science Talent Search.

See Front Cover

► THE MOST PROMISING young scientist of the year is Robert Fletcher Sproull, 16, a student at Phillips Exeter Academy, Exeter, N. H.

Robert is the son of Dr. and Mrs. Robert L. Sproull of Alexandria, Va. His father, a former physics professor at Cornell University, Ithaca, N. Y., came to Washington last year to serve as director of the Advanced Research Projects Agency of the Department of Defense.

Young Sproull has been awarded the \$7,500 Westinghouse Science Scholarship in the 23rd Annual Science Talent Search after the judges selected him from a field of 3,141 high school seniors in the nation who submitted completely qualified entries.

Robert prepared a project involving sodium chloride crystals with "color centers" formed by trapped electrons which absorb light. He observed several properties of these color centers which were electrolytically produced and compared them with the known properties of color centers produced in a different way.

Four other scholarships were awarded: \$6,000 to Robert Bowen, 16, of Fairfield, Calif., whose mathematical project was entitled "Certain Sequences of Always Composite Integers."

\$5,000 to Lee R. Girtan Snyder, 18, of Huron, S. Dak., who investigated the loss of pigmentation in pigeon feathers and determined that genetic factors were responsible.

\$4,000 to Joseph D. Locker, 16, of Pittsburgh, Pa., who studied the effects of various incubation temperatures on chick embryos.

\$3,000 to New Jersey's Richard Linke, 17, of Plainfield. Richard studied the behavior of ultrasonic sound waves in a liquid medium.

The five happy scholarship winners are seen on this week's front cover just after the announcement of the awards at the Statler Hilton Hotel, Washington, D. C.

The two alternates selected by the judges are both from Maryland.

First alternate to the \$3,000 scholarship is Stephen Winters, 17, of Silver Spring. Second alternate is Henry Jaffin, 17, of Chevy Chase. Stephen's work has been in mathematics, while Henry has concentrated on two anti-cancer compounds.

Ten girls and 25 boys received Westinghouse Awards of \$250 each in recognition of their top level ability and promise as creative scientists of the future.

The Science Talent Search is administered by Science Clubs of America, a SCIENCE SERVICE activity, and is supported by the Westinghouse Educational Foundation.

Top winner Sproull plans to attend Har-

vard University to prepare for a career as a research physicist. His interests include photography, sailing, hiking, squash and crew.

Bob Bowen also has many interests. He is president of the senior class at Armijo Joint Union High School and of the school's mathematics club. He also is in the starting lineup of his school's varsity basketball team. Bob plans to major in mathematics at the University of California at Berkeley.

Lee Snyder, a senior at Huron High School, finds literature, chemistry and debate his favorite topics at school, and his other interests include snare drum and mandolin, mountain climbing, alpine ecology and poetry. Lee wants to enter Harvard University and obtain a degree in chemistry followed by a doctorate in biochemistry or genetics.

Joe Locker, Taylor Allderdice High School senior, plans to take a pre-medical course at Harvard. Eventually he plans to do medical research, particularly in the field of endocrinology. Music and chess are Joe's favorite spare time activities.

Richard Linke's hobbies include amateur radio, photography, radio-controlled models, and high fidelity systems. He plays the cornet and guitar. Now a senior at Plainfield High School, Richard plans to attend Columbia University to study applied physics.

Steve Winters is a senior at Montgomery Blair High School, Silver Spring, Md. He is interested in the philosophy of science, also logic, camping, cycling, reading philosophical works, and collecting rocks, coins and stamps. He plans to work toward a degree in physics at the Massachusetts Institute of Technology.

Henry Jaffin, senior at Bethesda-Chevy Chase High School, Bethesda, Md., plans to study biology and chemistry at Haverford College. Eventually he wants to do research on cancer and memory phenomena. Henry's other activities include photography, microscopy, bicycling and weight lifting. Henry was a finalist at the 1963 National Science Fair-International.

• Science News Letter, 85:163 March 14, 1964

TECHNOLOGY

New Machining Method To Cut Weapons Cost

► THE COST of advanced weapons systems made from hard, brittle structural materials is expected to be reduced as the result of a new process—electrical discharge machining.

Developed by the Air Force Materials Laboratory at Wright-Patterson Air Force Base, Ohio, the new system replaces the slow, costly machining process previously done by skilled technicians with a diamond wheel.

Working with an electrical discharge machine, machinists unskilled in ceramics are able to shape electrically-conductive ceramic materials in minutes.

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Fremont Davis

ON THE CAPITOL STEPS—A visit to the Capitol was included in the activities of the 40 winners during their five-day stay in Washington.