

GENERAL SCIENCE

1959's Top Young Scientists

► THE TOP young scientists of 1959 have been selected.

They are 427 high school seniors in towns all across the country who have won a place in the Honors Group of the 18th Science Talent Search for the Westinghouse Science Scholarships and Awards.

Because of the increasing number of outstanding students competing, the size of the Honors Group has been enlarged this year to ten percent of the 4,274 entrants who were fully qualified to be judged.

The creative enthusiasm of these promising young scientists is evident in the research papers they submitted as part of the stiff entrance requirements.

A list of the Honors Group is being distributed. It will be sent on request accompanied by a self-addressed stamped envelope.

Like some of the world's eminent adult scientists, these young people are exploring such important frontiers as free radicals, symbolic logic, the effects of radiation, and new ways of using electronics.

A 17-year-old New Mexico boy with a yen to be an astrophysicist proposes a method to determine the altitudes of lunar features, while a Georgia boy discusses nuclear reactions in the solar interior.

Drug resistance is the special study project of a 16-year-old New York girl, and the familiar effect of fresh pineapple on the setting qualities of your gelatin salad is investigated by a girl from San Francisco.

A mature study of the sigma hyperon, a sub-atomic particle, has been done by a 16-year-old boy from Cambridge, Mass. A

delightfully written paper on the domestic and personal habits of ants is titled "Antics of the Ant" by the young Tallahassee girl who studied these insects.

The 427 members of this Honors Group range in age from 15 to 20, go to school in 265 communities in 43 states and the District of Columbia, and rank high in their high school graduating classes, with 79% of the boys and 89% of the girls in the top five percent of their classes. The rank of first, second or third in the class has been attained by at least 46% of the boys and 56% of the girls. Since the ratio of girls among the Honors Group is determined by the number of girls completing entries, 94 of these outstandingly competent pre-scientists are girls, while 333 are boys. All of them will be recommended for admission and scholarship awards to the nation's colleges and universities.

Forty of the recipients of honors will be invited to the five-day Science Talent Institute to be held in Washington Feb. 26 through March 2. During the Institute, the winners will be judged for \$34,250 in Westinghouse Science Scholarships and Awards. These winners will be listed in SCIENCE NEWS LETTER, Jan. 31.

The annual Science Talent Search is conducted by Science Clubs of America, an activity of SCIENCE SERVICE, and is supported by the Westinghouse Educational Foundation of the Westinghouse Electric Corporation.

Science News Letter, January 24, 1959



TURBINE WHEEL—This radial inflow wheel is made from Udimet 500, a superalloy, composed of heat treatable nickel-base alloy containing cobalt, molybdenum, chromium, titanium and aluminum. It is being tested at Boeing in Seattle.

GEOPHYSICS

Plot Positions Of Northern Lights

► THE POSITIONS of auroras, or northern lights, are being plotted by scientists from reports of volunteer observers scattered around the country.

The program is part of the International Geophysical Cooperation—1959, follow-up to the IGY. It is aimed at helping to chart the earth's magnetic field, which controls the pointing of a compass. This field is not at all uniform, being stronger near the poles. It is also affected by bodies of metallic ores. If the magnetic field is studied as it would be seen far from the earth, it is relatively smooth and approximates that of a simple magnet, or "dipole." Particles approaching the earth are affected by this field, whose pole is at about north latitude 79, west longitude 69.

A latitude-longitude system constructed on an axis through the center of the earth from this point gives the approximate "geomagnetic coordinates." Since stations on the same line of geomagnetic latitude see about the same number of auroras, the magnetic position of an aurora is more significant than its geographic one.

Dr. Carl W. Gartlein, head of the U. S. visual observation headquarters at Cornell University, Ithaca, N. Y., has found that plotting the observed auroral occurrence on geomagnetic coordinates does not give a simple line curve. Rather, equal aurora lines resemble "goose eggs" that cannot be simply described mathematically.

Science News Letter, January 24, 1959

MEDICINE

Alcoholics Get Care

► ALCOHOLICS are finding more community hospital doors open to them.

Hospital officials and the public alike are accepting the fact that alcoholism is a disease, not a "periodic bout with acute intoxication."

A study of New York State hospitals admitting alcoholics may point the way for other hospitals throughout the nation, said Paul F. Robinson, assistant director of the New York State Interdepartmental Health Resources Board, Albany, N. Y. Now there is evidence that tranquilizing drugs are a boon to the general hospital in quieting disturbed alcoholics and making them manageable.

The New York researchers are hopeful that hospitals which have rejected alcoholics on the basis of their being difficult to manage can accept them as patients with the same need for treatment as persons with pneumonia, heart trouble or any other disease.

Another important finding, Mr. Robinson said, was the fact that 81% of the hospitals accepting alcoholics took in persons who were sober at the time but were in need of treatment and observation.

From the financial aspect, the alcoholic patient is a good risk. Payments in full

or in part were received from 79% of those admitted to general hospitals, Mr. Robinson said. Also, almost 92% of the alcoholics admitted to voluntary general hospitals made payments before being discharged.

Results of the study, conducted by the Health Resources Board in cooperation with the Hospital Association of New York State, showed that hospitals in New York City and the "immediate metropolitan areas" had a low admission rate for alcoholics. Hospitals in the Rochester region and neighboring counties, however, had a high admission rate.

Both the American Medical Association and the American Hospital Association have issued resolutions urging community general hospitals to accept alcoholics. Details of the New York study, published in the *New York State Journal of Medicine* (Jan. 15), support their recommendations.

Dr. I. Jay Brightman, executive director of the Health Resources Board, and Charles M. Royle, of the New York Hospital Association, are co-authors of the report. In addition to Mr. Robinson, Bernard Ferber and William T. Robinson also worked on the study.

Science News Letter, January 24, 1959