

GENERAL SCIENCE

# Science Talent Search Washington Trip Winners

The following 9 girls and 31 boys (proportion determined by proportion of boys and girls entering the contest) are being invited on all-expense trips to Washington, D. C., July 13-15, 1942, where one boy and one girl will be awarded \$2400 Westinghouse Grand Science Scholarships and 15 boys and 3 girls will be awarded \$200 Westinghouse Science Scholarships.  
(\* Indicates girls)

## CALIFORNIA

**Glendale** Calhoun, William Denman 16 Herbert Hoover High School  
Kofahl, Robert Eugene 17 Herbert Hoover High School  
Phillips, Robert Edward 18 Herbert Hoover High School

## IDAHO

**Lewiston** Eastman, William Byron 16 Lewiston Senior High School

## ILLINOIS

**Chicago** Korn, Hugo 16 Tuley High School  
**Freeport** Ousley, Joseph Livingstone 17 Freeport High School  
**Oak Park** \*Jacobson, Janet Mary 16 Oak Park High School

## INDIANA

**Evansville** Barthel, Paul Joseph 18 Reitz Memorial High School  
\*Pease, Evelyn Alice 17 Benjamin Bosse High School  
**Hammond** \*Ross, Jean Carol 17 Hammond High School

## KANSAS

**Kansas City** Hoover, Richard M. 17 Argentine High School

## MINNESOTA

**St. Paul** Larimore, Wayne Homer 18 Murray High School

## NEW JERSEY

**Boonton** Winsor, Paul, III 17 Boonton High School  
**Salem** Newell, James 18 Salem High School

## NEW YORK

**Camden** Worthington, William Dorrance 17 Camden High School  
**Farmingdale** \*Prajmovsky, Marina 18 Farmingdale High School  
**Floral Park** Halberstadt, Nathaniel Herbert 16 Sewanhaka High School  
**Frewsburg** Davis, Homer Frederick 18 Frewsburg High School  
**Hinsdale** Dehnkamp, Gilbert Christopher 16 Hinsdale Central High School  
**New York** Avallone, Eugene Attilio 16 High School of Commerce  
Greiff, Robert 16 Brooklyn Technical High School  
Hollander, Lester Blessing 15 Bronx High School of Science  
Linder, Seymour 16 James Monroe High School  
\*Meirowitz, Beatrice 16 Walton High School  
\*Pike, Carol Ruth 15 Walton High School  
**Niagara Falls** Swartz, Clifford Edward 17 Niagara Falls High School  
**Rochester** Presberg, Jack Eugene 17 Benjamin Franklin High School  
**Schenectady** White, Donald Robertson, 17 Mont Pleasant High School  
**Sea Cliff** Brown, Barton 17 Sea Cliff High School  
**Troy** \*Williams, Mary Ann 17 Troy High School  
**Utica** Karo, Wolf 18 Utica Free Academy

## NORTH DAKOTA

**Park River** Borgeson, Warren Thomas 17 Walsh County Agricultural School

## OREGON

**Salem** Voigt, Allan Earl 17 Salem High School

## PENNSYLVANIA

**Mount Penn** \*Wien, Julia Anne 17 Mount Penn High School  
**Pittsburgh** Michener, John William 18 Taylor Allderdice High School

## WEST VIRGINIA

**Weston** Lynch, Robert Lee 16 Weston High School  
**Wheeling** Smith, Harlan James 17 Wheeling High School

## WISCONSIN

**Lakemills** Cranefield, Paul Frederic, Jr. 17 Lakemills High School  
**Shorewood** \*Jones, Betty-Jane 18 Shorewood High School  
Teschan, Paul Erhard 18 Shorewood High School

## ● RADIO

Saturday, July 4, 1:30 p.m., EWT

"Adventures in Science," with Watson Davis, director of Science Service, over Columbia Broadcasting System.

A report on "How Science Can Help Win the War" from the Science Talent Search.

Tuesday, June 30, 7:30 p.m., EWT

Science Clubs of America programs over WRUL, Boston, on 6.04, 9.70 and 11.73 megacycles.

One in a series of regular periods over this short wave station to serve science clubs, particularly in the high schools, throughout the Americas. Have your science group listen in at this time.

ASTRONOMY

## Invisible Star Discovered By Photographic Means

By C. A. FEDERER, JR.

THE well-known double star in Mu Draconis has an invisible companion besides its two visible components, Dr. K. Aa. Strand, of Sproul Observatory, Swarthmore College, reported to the American Astronomical Society meeting in New Haven.

Mu Draconis was discovered as a double star with two equally bright components by Sir William Herschel, in 1779. The motion of these two visible stars has been followed by double-star observers and, from the path the two stars have described since 1779, it can be said that they revolve around each other in about 1,500 years.

The presence of the third star was discovered by Dr. Strand from a regular fluctuation from the expected motion, having a period of three years. This fluctuation is caused by the gravitational attraction of the unseen star as it revolves around one of the visible stars, but only the accurate photographic observations made with the large Sproul telescope have revealed these fluctuations.

Mu Draconis is about 100 light-years away and has a mass about  $3\frac{1}{2}$  times the sun's, while the unseen companion is a dwarf star with a mass of one-half the sun's. The two bright stars are separated by about 70 times the distance of the sun from the earth, or about 6.5 billion miles; whereas the newly-discovered companion revolves around one of the stars at only 250 million miles.

In 1940 the discovery of a similar invisible companion to the star Zeta Aquarii was reported by Dr. Strand. (See SNL, Nov. 30, 1940).

Science News Letter, June 27, 1942