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OCHS junior takes 2nd in international science competition

By KAREN CLARK



Matt Walentosky placed for his astronomical research on Cataclysmic Variable Stars.

An Oil City high school junior is "going where no man has gone before."

Matt Walentosky has earned second place honors at the International Science Fair in Atlanta, Ga., last week.

As the first-ever Oil City student at the prestigious event, Walentosky was among 1,500 students from the U.S. and around the world vying for scholarship and cash awards.

Coming away with the second place honors for his astronomical research on Cataclysmic Variable Stars, the young scientist earned a \$1,500 cash prize. Earlier in the week, he took second place for the American Astronomical Society Sponsors Award, winning a \$3,000 scholarship for himself and a

\$1,000 check for the astronomy program at Oil City High School.

Although the cash prizes are certainly welcome, the scope of the project presented by Walentosky may have a much greater impact than a few dollars, reaching across the world to the entire scientific community.

"Some of the fundamental structures ... are going to need to be re-compounded once the data is verified. Our paper is being published in the astrophysical journal and will be reviewed by other scientists," Walentosky said.

No stranger to the winner's circle, Walentosky earned eligibility to compete in Atlanta at Pittsburgh Regional Science & Engineering Fair in April at the Carnegie Science Center where he was one of three students to advance to the international competition.

He said he is still in awe of the events of the last year and hasn't given much thought to college choices at this time.

"I'm really not sure what would be next. I'm just trying to rebound from all this," he said.

Listening to Walentosky detail the very specific elements associated with the project is a jargon too complicated for average folks, but one he has embraced as a consistent companion for most of the last several years.

Mentored by science teacher Tim Spuck, Walentosky's research project is on the cataclysmic variable star WZ Sge. He used observations from the Spitzer Space Telescope, Perth Observatory, and light curves from previous studies to better understand the nature of the object and its associated activity.

For his honors in April, Walentosky was awarded a \$12,500 annual scholarship to Allegheny College, and an honorable mention award by the U.S. Army. All his expenses for the international competition were paid as well.

Last October, along with Spuck, he joined 11 other teams at the Spitzer Science Center in California after earning the rare opportunity for the research time on a telescope designed to search for heat radiated from distant stellar objects. The thermal emissions reveal matter that would otherwise be hidden, such as newly-formed stars nested inside dense nebulae, Spuck said.

Nearly three years ago, Spuck was selected as one of a dozen teachers from

across the country for a program that allows use of NASA's Spitzer space telescope. The program is a collaborative effort of the Spitzer Science Center and the National Optical Astronomy Observatory designed to inspire and motivate students to pursue careers in science, technology and mathematics and engaging the public in the experiences of exploration and discovery.

Spuck received the Christa McAuliffe Teacher Fellowship in 1998, which included a \$40,000 grant that he used to improve the science experience for his students. With assistance from the National Radio Astronomy Observatory, Spuck's students began working on the Mapping the Universe project in 2000, using data from the Arecibo Radio Telescope in Puerto Rico to measure rotational and recessional velocities of distant galaxies and to calculate the expansion rate of the universe. Both the Hands-On and Mapping programs are work usually reserved for astronomers, according to experts.

The Oil City team has discovered previously undocumented newborn stars in the Witch Head Nebula, a cloud in the Orion constellation.

Students in the program have dedicated hundreds of hours of school and free time to further the research. The student/teacher entourage has made previous trips to Seattle and Tucson where the research team won observations time following a competition last year.