

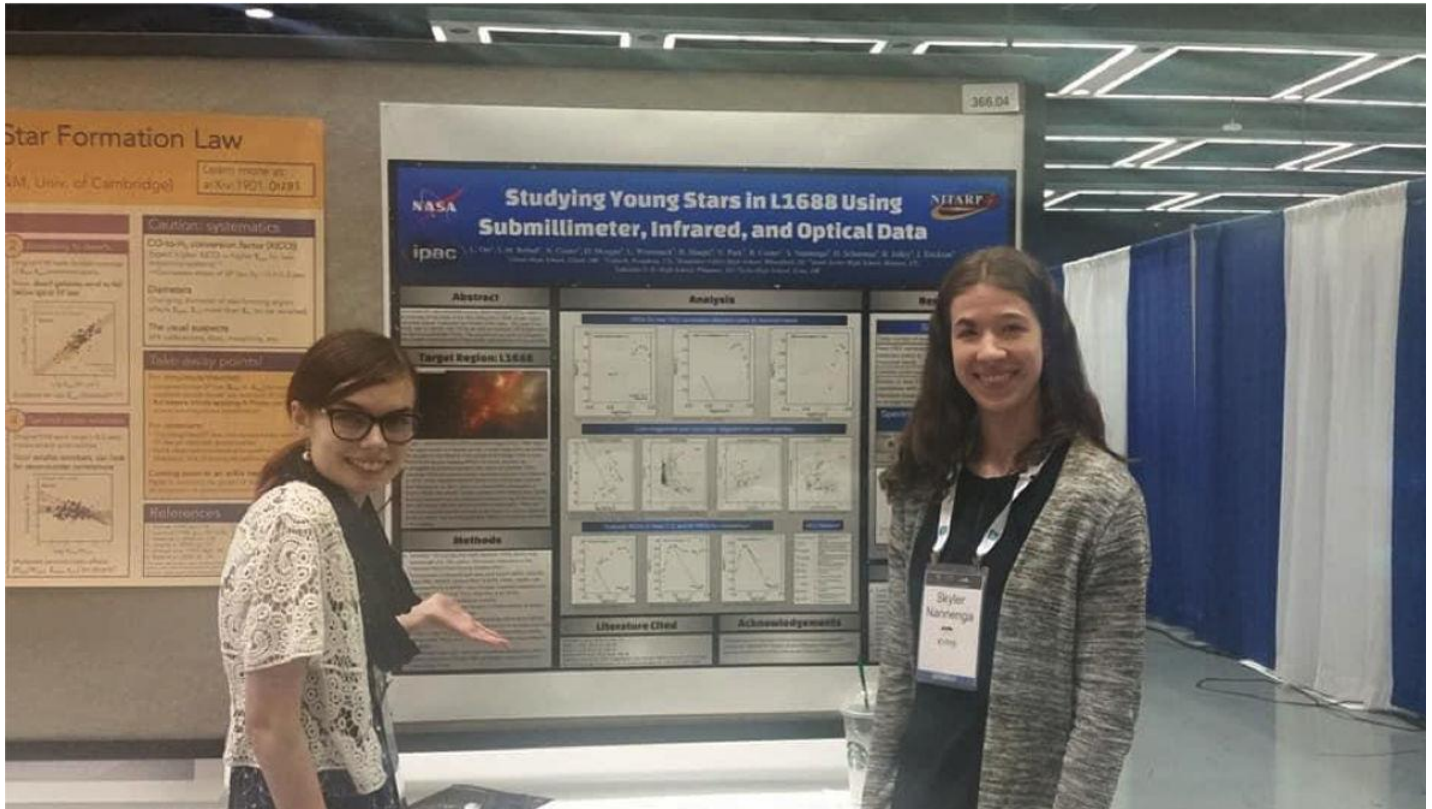
http://www.newsbug.info/kankakee_valley_post_news/news/local/kankakee-valley-high-school-seniors-make-big-discovery/article_c20e84f4-f2f5-5156-a019-1b9754c250b8.html

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TOP STORY

Kankakee Valley High school seniors make big discovery

By Cheri Shelhart kvpreporter@gmail.com Mar 12, 2019



Photos Provided

Brianna Coster and Skylar Nannenga stand by their poster presentation they gave in Seattle, Washington, in January telling how they discovered the three stars in the Rhoophiuchi section of space outside the Milky Way.

Photos Provided

WHEATFIELD — Two KV High School students and their teacher, while working on a research project, discovered three young stars no one has discovered before. The three traveled to Pasadena, California, in the July to become part of a NASA research training program offered to students in both high school and college.

First, the program sends invitations to teachers, who if interested are asked to fill out an extensive questionnaire, and from there, go through an interview. The program is sponsored by NASA and conducted at Cal Tech (California Institute of Technology).

Physics teacher Nancy Coster decided to apply, and out of over 100 applicants, was chosen to participate in this research program. She in turn was challenged to find two students who would become part of a team. She had her students who are interested go to a website that had timed puzzle challenges and videos for the students to watch. In the end, the decision was easy; only two students viewed all of the videos, seniors Brianna Coster and Skylar Nannenga.

Nannenga said she has always been interested in astronomy and Brianna Coster said she loves research. Once at Cal Tech, the girls and their teacher met with their team led by Dr. Luisa Rebull, an astrophysicist and director of the NASA/IPAC Teacher Archive Research Program. The weeklong training program included learning to research various databases to identify and locate new stars yet to be discovered. They were given a certain quadrant in space, not far outside our own Milky Way galaxy, and all the data they could find, and the girls said there was plenty of data to sort through.

The girls said they worked 14 to 15 hours a day sifting through the data, charts and histograms, and a variety of software looking for images, density, wavelength fluctuations and tables of the portion of space they were assigned. After their week in California, the girls continued to research. "Once we got home, we cranked out the rest in about 30 hours," Brianna Coster said, "analyzing, crunching numbers..."

"It was a once in a lifetime opportunity," Nannenga said.

Why, because they discovered, not one, but three "young stellar objects" that had not been found before. The sector they were researching is called, "Rhoophiuchi," and once they learned how to read the data and other sources, they went to work.

In January, the girls were invited to give a presentation to the American Astronomical Society meeting in Seattle, Washington, where they met astronomers, professional and amateur, from across the globe. The crowd included professors from Harvard, Cambridge and Oxford. Somewhat intimidating to the young women, they gave their presentation in an "open" session and found some of the professors were impressed, even Harvard.

Brianna Coster said there is so much data to be researched that only 15 percent of it is studied every year. NASA has a public website where anyone can go and look at the data; one just has to know what to look for and how to read it.

While visiting the city of Seattle, the girls were able to take in some sights as well, including the space needle. They also visited the jet propulsion laboratory at Cal Tech where rockets are designed and built. They saw areas of the school where the television show, "The Big Bang Theory" is filmed.

Both young ladies plan to attend Purdue University, with Nannenga continuing in the field of astronomy with plans to be an astronomical engineer, while Coster plans to be a speech therapist. Nannenga said astronomical engineers design telescopes, rockets, rocket ships, satellites and new machines to read all the data that comes from space. They've also designed the Mars Rover.

"I love space, but I don't want to go to space," she said. They were both excited to be a part of this NASA research program. They are hoping once the professional astronomers, Dr. Rebull and colleagues, confirm their findings, they will get to name the stars they've found. They will also be included in a professional scientific research article of the discovery.

It's quite a discovery for two high school students and a proud moment for the school and the community.

"Astonomers don't just look at the stars all day."

Skylar Nannega

Cheri Shelhart