The Torch

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University High School 2450 Cougar Way Orlando, FL 32817

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Coach Ms. Sally Jarvis is

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Mrs.Miller and students travel to California to work on NASA's Kepler project

Brooke Dennis

Copy Editor

Imagine standing on top of Mount Wilson outside of Pasadena, California, looking out across the desert, standing at the place where Edwin Hubble first discovered the expansion of the universe.

Imagine looking at graphs of 200 stars with three other groups of people, trying to figure out which stars have a potential to have planets that can support life.

That's what science teacher, Ms. Danielle Miller, and two students, senior Zuheily Quinones and junior Elizabeth Warner did as part of the NASA/IPAC Teacher Archive Research Program (NITARP) team this summer.

The purpose of the trip was to collaborate with three other teams of students and teachers that had been tracking 50 stars with the *Kepler* project.

The purpose of *Kepler* is to investigate celestial bodies outside of our solar system to see if their conditions could support life. The four teams from around the country had 50 stars each, and compared their findings back in July. The result?

"Graphs, graphs, everywhere!" exclaimed Mrs. Miller. After that, the women went to Mount Wilson, where astronomer Edwin Hubble discovered through a telescope the expansion of the universe, the theory that says our universe is constantly expanding outward.

"I didn't realize how much history was there. It was very, very cool," said Mrs. Miller. "Let's be honest, who doesn't love Hubble?

The next morning, the women toured NASA's Jet Propulsion Laboratory, where NASA monitors the launches of satellites and rovers such as Curiosity and Explorer.

"We got to see where spacecraft are assembled, an indoor Mars yard, and a cool museum with lots of my favorite solar system exploring robots," said Mrs. Miller.

The third day was packed with more research in the *Kepler* room.

There was some rechecking of data to be done, which did take some math.

"We realized that day we probably should have packed graphing calculators, as we became very familiar with the Stefan-Boltzmann law," said Mrs. Miller.

The Stefan-Boltzmann law determines how much radiation comes off a celestial body.

At the end of the day, the teams felt that they might have found something.

"Maybe not exactly what we thought we would find in the first place, but definitely something," said Mrs. Miller.

This trip even had the girls considering a career in science.

"I want to figure out what area of engineering I want to go in to," said Quinones.

The trip also inspired Mrs. Miller.

"I can't wait to share the feeling of working hard to solve problems to find, or not find, an answer with my students this year," mentioned Mrs. Miller.