

# Interns make archived NASA planetary science data more accessible

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Interns Nathan Berg and Ki Huang, seated from left, discuss their work on NASA's Planetary Data System's Small Bodies Subnode project with PSI's Eric Palmer and Beatrice Mueller.

An internship program offered by NASA's Planetary Data System's

Small Bodies Subnode hosted at the Planetary Science Institute is making archived scientific information more accessible to researchers and the public.

"This is an outstanding opportunity for NASA scientists to connect with the youth of the nation," said PSI Research Scientist Eric Palmer, who heads the intern program.

Two Pima Community College (PCC) students kicked off the program, working to improve the access to the data archive, said PSI Senior Scientist Beatrice Mueller, co-investigator on the program.

"This internship will benefit us by improving our archive web sites, which will help our users," Mueller said. "It will be beneficial for the students to provide them with technical skills they might otherwise not be able to acquire, and will prepare them better for the job market. We also provide them with a stipend."

"PCC students will expand their knowledge of opportunities available in high-tech areas and experience the challenges in dealing with 'big data,' " she said.

Palmer said, "We want this next generation to feel the same thrill of exploration that we do, and we hope that this program motivates more students in that way."

"These students gather, analyze information, and engage in creative communications, utilize critical thinking skills, and increase their knowledge of computer web page design while learning about the NASA's [space science missions](#) and research," said PCC's Joy E. Barr. "This most definitely opens doors for students to consider applying to more [high tech jobs](#) locally, nationally, and globally. Further, this internship will level the playing field for this traditionally minority

underrepresented, low income, and first generation population."

Nathan Berg and Ki Huang are the first two intern participants. Berg, 37, is currently enrolled in Pima's Systems Administration/Networking associate degree program with the possibility of transferring on to Northern Arizona University's online bachelor's program for technology management. Huang, 18, is currently enrolled as an Upward Bound student working towards a degree in mechanical engineering.

"My role has been to come up with a updated layout for PSI's Asteroid/Dust Archive which is part of NASA's Planetary Data System," Berg said. "Most of my time has been spent learning how to write and apply code to fit the rough design or layout that Beatrice and I came up with. Probably the most interesting and challenging part to this has been trying to create a functional and efficient navigation menu to improve the user experience when searching for specific data."

"My role as an intern has involved finding and converting images in various data sets that have been missing in the PSI website so they can be inserted for reference," Huang said. "I also began working on programming a data set ingest tool using Python programming language which will assist in the archiving process."

"Meeting the scientists and discovering the different jobs and roles each person has at PSI has been a memorable and great learning experience. I have enjoyed learning Python programming the most because it has been the greatest challenge thus far and I am continuing to learn as I go," Huang said. "This opportunity has ultimately taught me more about myself and my interests as I look into the future of what I want to study."

Plans call for students from the Tohono O'odham Community College (TOCC) to participate in the program. "The internship will provide opportunities for Tohono O'odham [students](#) to experience a work

situation outside the college and reservation, and insight into how data like those acquired at the Kitt Peak National Observatory – located on their reservation – are used by the broader astronomical community," Mueller said.

The intern program runs five years, and PSI intends to seek an extension for an additional five years, Mueller said.

Provided by Planetary Science Institute

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