Anjani Polit: A Life of Exploration

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When Anjani Polit was in junior high school, her teacher assigned a daunting bit of homework: Write an essay about what you would like to be doing in 10 years.

Back then, Polit couldn't have said why, but she wrote of being a planetary scientist. Polit has since made a career of her teenage musings and is now the mission implementation systems engineer for OSIRIS-REx, the UA-led asteroid sample return mission.

In her OSIRIS-REx post, Polit is responsible for making sure that the mission is checking off each of its requirements, on time and as planned. OSIRIS-REx is a first-of-its-kind U.S. mission to vacuum a sample of rock and dust from the surface of the near-Earth asteroid Bennu and bring it back to Earth for analysis. The robotic spacecraft launched in September and is en route to Bennu.

"I'm helping the principal investigator, Dante Lauretta, and the deputy principal investigator, Heather Enos, with the entire process of planning. Basically, my job is to help make sure OSIRIS-REx is successful in its science goals," Polit said.

While OSIRIS-REx cruises toward Bennu, there is plenty of work for the team's members. They are working to calibrate the instruments on board the craft, as well as completing a gravity assist.

Prior to joining the OSIRIS-REx team, Polit spent 10 years working on another UA-NASA collaboration: the High-Resolution Imaging Science Experiment, or HiRISE, aboard the Mars Reconnaissance Orbiter. She began working on HiRISE as a targeting specialist after completing her master's degree at the University of Nevada, Reno. Then, her job was to gather information about locations of interest across the Martian surface before they were to be photographed by HiRISE. Later, she became the uplink operations lead, working with target specialists and scientists to make informed decisions about when, where and how to snap photos of Mars.

Just before joining OSIRIS-REx, Polit programmed the HiRISE camera to image the crash site of the ExoMars Schiaparelli lander in order to verify its location for its owners, the European Space Agency and the Russian space agency Roscosmos. It had detached from its companion orbiter and taken a nasty tumble on Mars, and its owners wanted to get a look at the site.

"Exploring other places, I think, is a noble pursuit, and it informs our understanding of the world we're in," Polit said.

Polit's professional life allows her to explore places untouched by humankind, places such as Mars and asteroids, but her exploratory inclination extends far beyond work. "I like to explore in all ways," she says.

Polit travels – she spent three nights in October hiking and canyoneering at the North Rim of the Grand Canyon. She also ballroom dances – she likes salsa and West Coast swing – and serves as a search-and-rescue volunteer for the Southern Arizona Rescue Association. One of her recent rescues involved tracking a lost hiker at Mount Lemmon in the dark, using only footprints.

"The desire to learn and to explore is part of being human," Polit said. "I'm excited to now be working on this team for the OSIRIS-REx mission. It's rewarding to contribute."

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