

PARI today: providing hands-on science education

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Editor Note: Author Craig Gralley's book, "PARI: An Untold History of Spacemen and Spies" tells the story of how a small community in the mountains of North Carolina helped to win the space race, the Cold War and became a model for science education. Earlier articles chronicled the Rosman Tracking Station's

years under NASA (1963-1981) and later how the Rosman Research Station under the Department of Defense's National Security Agency (1981-1995) intercepted secret foreign communications during the Cold War. This article explores DoD's departure and the rise of PARI, which takes a "hands-on" approach to student science education.



Courtesy photo

– PARI, 9A Author Craig Gralley (left) with PARI President Don Cline.

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It's still a closely held secret why the Defense Department's National Security Agency abandoned its Rosman Research Station (RRS) in 1995. The station likely was a victim of its own success.

Between 1981 and 1985 the NSA facility operated on a shoe-string budget at very little cost to DoD.

In fact defense department employees called Rosman Research Station, "Rosman Radio Shack," a reference to the discount electronics retailer where supplies were purchased to keep the site running.

After the RRS proved its worth in collecting secret Soviet communications, the military in 1985 spent \$200 million on site improvements and the number of personnel nearly doubled to 450.

With new contract employees and infrastructure the yearly cost of

operating and maintaining the site reached new heights. Rosman Research Station had become an important contributor to our nation's security but also a significant line-item on the DoD budget.

Six years later in 1991, the Soviet Union disintegrated and Americans were looking for a "peace dividend."

As a cost-pressure mounted, the DoD began implementing a "base realignment and closure" (BRAC) program. Rosman's large yearly operations and maintenance costs caught the eye of DoD budgeteers in 1993.

The decision to close the site became final and in 1995 DoD departed without finding a new tenant.

The U.S. government agreed to maintain the Rosman facility until Sept. 30, 1996.

If no tenant could be found, the DoD was required to return the property to the Forest Service

in its original state. This meant the defense department would dismantle its huge investment — buildings and antennas would be torn down, underground storage tanks and concrete walkways dug up, all its infrastructure hauled away before the site was regraded and reforested. It would be a huge and costly undertaking that neither the Forest Service nor DoD wanted to contemplate.

As the months drifted by no buyer was found — which wasn't surprising given the legal hurdles a new owner would face. For example, the Forest Service could not accept a cash offer for the site. Transfer required a land-for-land swap, followed by a host of Environmental Protection Agency and other government reviews and finally the deal had to be approved by both houses of Congress.

After many false starts from would-be owners, and within weeks of the Forest

Service pulling the plug on its sales campaign, a white knight arrived at the front gate. Don Cline, a former Bell Labs engineer and founder of Micro Computer Systems — a manufacturer of telephone testing equipment — was looking for an antenna for Appalachian State University.

After viewing the site Cline developed a bold new vision to acquire the whole site and create science education and research center for student science education.

He successfully traversed all of the hurdles and in 1998 began realizing his vision of a "hands-on" student science education center he called the Pisgah Astronomical Research Institute.

Surprisingly there are so few research telescopes around that many graduate students in astronomy and astrophysics never get a "hands-on" experience using one. PARI

offers this opportunity to our area's grade-school students. PARI was one of the first institutions to offer students control of its radio telescopes using the internet. Antennas that intercepted foreign communications now are being used by schoolchildren to map the rotation of The Milky Way and explore the origin of stars and planets millions of light years away.

The learning continues with a traveling planetarium, an inflatable igloo that uses a star projector to place an image of the night sky on the interior dome. PARI classes complement school programs in science, social studies, art and history. One class titled "The Stars of Lewis and Clark" teaches the story of how the explorers of the Louisiana Purchase used the sun, moon and navigational stars to map their journey across the United States.

But perhaps the shining jewel of PARI's educational

program is its summer space exploration and astronomy camps, available for students of all ages and interests. PARI's programs encourage deeper thinking and problem solving skills while finding opportunities for comradery, adventure and fun. It inspires students to become tomorrow's astronauts, physicists or engineers.

PARI offers private tours and has much more to offer. Its vision is embodied in an inclusive mission statement: "Revealing the unseen and empowering people to reach their next frontier."

"PARI: An Untold History of Spacemen and Spies," is available at www.pari.edu/shop and Highland Books in Brevard. All author profits are being donated to further PARI's student science programs.

For more information about Gralley and his work, visit www.craiggralley.com.