

Education Programs at the Pisgah Astronomical Research Institute

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The Pisgah Astronomical Research Institute (PARI) is a not-for-profit public foundation with the mission to provide research and educational opportunities for a broad cross-section of users in radio and optical astronomy and in the related disciplines of physics, mathematics, engineering, earth sciences, chemistry and computer science.

PARI's educational initiatives involve students of all ages, including K-12, undergraduate and graduate.

PARI is located at the site of the former NASA Satellite Tracking Station in Rosman, NC (35 mile southwest of Asheville). During the early days of the nation's space program it was the primary east coast facility for tracking and monitoring manned space flights. Today, the facility and its many telescopes and instruments are used by teachers and students to study various aspects of science.

PARI offers a hands-on approach to science education. At PARI, students learn science by doing science.

Current education initiatives include the following programs. For those seeking more information, we include the contact person at PARI.



Figure 1. Dr. Bob Hayward Stands in front of the StarLab Planetarium.

StarLab

In terms of sheer numbers reached, PARI's StarLab has become one of the most popular astronomy programs in the Carolinas. To date, more than 35,000 people have viewed its presentations and we have recently expanded our program offerings. In 2006, PARI will introduce "Observing the Diverse Sky," a StarLab program showing the night skies as viewed by other cultures. (Contact: Bob Hayward. email: rbhayward@pari.edu.)

School of Galactic Radio Astronomy (SGRA)

Commonly called "the Smiley program" because it utilizes PARI's 4.6 meter radio telescope, SGRA is a grade 8-12

radio astronomy lab that allows students to access a PARI radio telescope and conduct experiments. Teachers are trained to remotely use Smiley via the Internet. More than 200 teachers have been certified and they have used Smiley to benefit more than 3,000 students, some as far away as Australia. The next Smiley workshop will take place on March 18, 2006. (Contact: Mel Blake. email: mblake@pari.edu)



Figure 2. The Smiley Radio Telescope along with the large 26m West antenna at PARI.

Duke Talent Identification Program (TIP)

In cooperation with Duke University, each summer PARI hosts an on-campus intensive learning experience for talented high school students. Selected students learn the principles of radio astronomy and conduct hands-on experiments. Several TIP students have been involved in ongoing research projects following their summer experience.

(Contact: Michael Castelaz. email:mcastelaz@pari.edu)

Home School

Expanding our education mission, PARI initiated "Home School Day at PARI," an on-campus experience for students being schooled at home. PARI plans to continue and expand this program and is currently working with a network of statewide homeschoolers to determine additional ways to serve this important segment of K-12 students.

(Contact: David Clavier. email:dclavier@pari.edu)

Space Science Lab

Scheduled to begin in the Summer of 2006, PARI will introduce the Space Science Lab (SSL), a program for high school students to study the Sun. They will conduct hands-on experiments and construct their own radio telescopes. Students will spend one week on campus at PARI followed by sessions throughout the year. Thanks to the support of the Burroughs Wellcome Fund, thirty of the students will be selected as Burroughs Wellcome Scholars.

(Contact: Michael Castelaz. email:mcastelaz@pari.edu)

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