Award Abstract #0552130

REU Site: Summer Bridge Program in Experimental Physics

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ABSTRACT

This award supports the Summer Bridge Program in Experimental Physics at the University of Arizona. Opportunities for undergraduate students to participate in ongoing research projects in experimental physics are structured in a summer REU program. Students may choose from a wide variety of forefront physics activities, under the direction of senior faculty members from the Departments of Physics, Astronomy, Optical Sciences, Lunar and Planetary Studies, and Atmospheric Sciences. The primary source of participants is students who have completed the equivalent of the first or second year curriculum in science or engineering at nearby Pima Community College, in preparation for transfer to a 4-year degree program. Graduate Teaching Assistants from the physics department serve as mentors for the participants. Special orientation and skills activities are individually tailored to enable the students to make signicant contributions to the research projects. This program promotes teaching, training, and learning as an integral part of the research experience given to the students. The combination of preparatory activities and research activities provide a base of knowledge and skills which enable these students to make nontrivial contributions to the research while becoming better prepared for the continuation of their technical education. There is also an education benefit to our graduate student mentors, who are directly involved in the educational and training process of this program. The geographical location and typical student makeup of the local community college provides a sizable minority population, which enhances the site's abilities to promote participation by underrepresented groups. Former participants are used as guest speakers and also serve as role models for these same subgroups of students. Many of the site's participants are in the first generation of their families in post-secondary education, and their research experiences provide an important bridge to the local community for the advancement of scientific understanding.

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