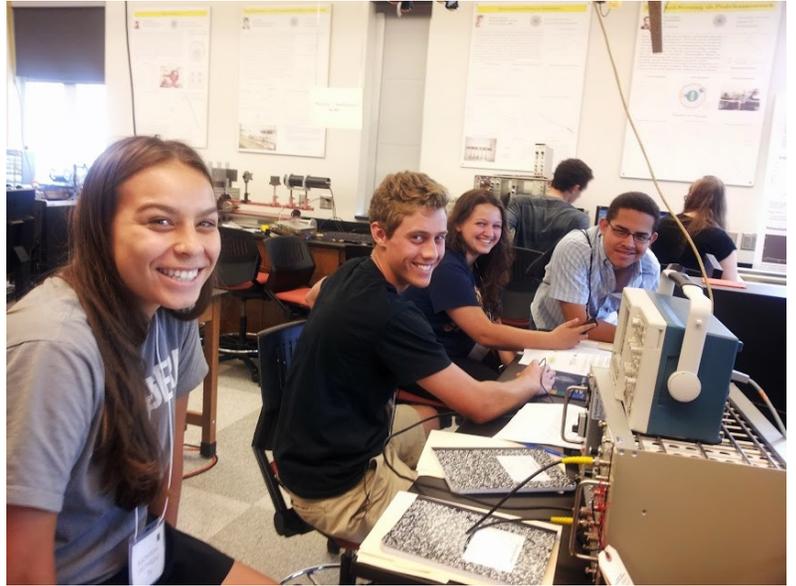


PAN—Physics of Atomic Nuclei

The goals of PAN are different from the usual goal of most K-12 outreach programs, which is to increase interest in physics. Instead, a high interest in physics is a pre-requisite for participation in PAN, and the primary goal is to mentor and train youth who are considering a research career. They are treated as young scientists in training during the week, and also experience college life by living in residential halls, many for the first time. Some of the most beneficial interactions occur during lunch or in the evenings when the students have time to talk informally with graduate students and faculty about their work and life in academia.



Each year 44 students are chosen from a joint applicant pool of over 200 for both MSU and ND locations.

The Physics of Atomic Nuclei (PAN@MSU) program at MSU was adopted by JINA in 2005, and modified to take advantage of JINA science. PAN@MSU is a week-long residential program. Participants learn about research at the NSCL, a forefront rare isotope accelerator facility, and are introduced to the fields of astrophysics, cosmology, and nuclear science through lectures and hands-on experiments.

20 middle and high school physical science, chemistry, and physics teachers also attend a separate week. This week also includes hands-on practice with the marble nuclei lessons and time to develop and share lesson plans. In the past year, we added an activity where teachers build their own Geiger Counter and develop lesson plans to use in the classroom at their home schools.



The Physics of Atomic Nuclei (PAN@ND) program (formerly PIXE-PAN) is a week-long summer science program for high school students modeled after the successful PAN@MSU. The program includes lectures from local professors and takes advantage of the modern lab designed to train graduate students. Students perform 5 experiments: Alpha Spectroscopy, Compton