Joint Institute for Nuclear Astrophysics
Center for the Evolution of Elements

JINA-CEE

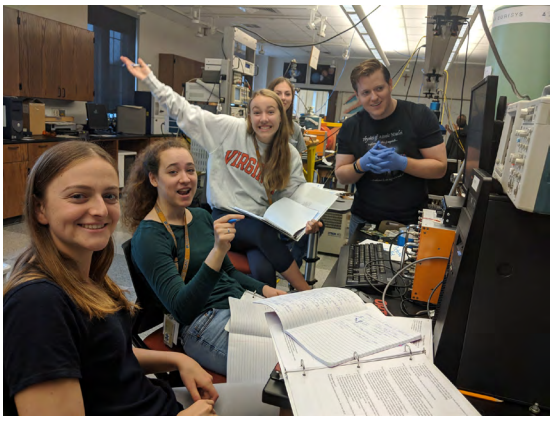
Physics of Atomic Nuclei

Physics of Atomic Nuclei hosted 44 high school students on the campuses of the University of Notre Dame and Michigan State University during the summer of 2018. A common application allows students to apply to both programs (MSU & ND) simultaneously. We received over 200 applications from which to select participants for both locations. Students represented 21 states, one US territory, and one overseas military base.

The programs at the two institutions are derived from the same model. During the respective weeks, students are presented with lectures by physics faculty, perform experiments using nuclear detection methods, and present their findings through presentations to parents and physicists. Students measure half-lives of radioactive isotopes and learn a variety of spectroscopy techniques. The primary difference is the experimental equipment available at each university for the program.

Most JINA-CEE outreach programs aim to increase interest in physics. The goals of PAN are different however; in fact a high interest in physics is a prerequisite for participation in PAN. The primary goal is to mentor youth who are considering a research career in physics and provide them with a realistic research experience so that they can make better-informed decisions about their future. They are considered young scientists in training during the week, and experience college life by living in residential halls and eating in the dining hall. 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 research and life in academia.

From students surveys the program increased their understanding of a science career, increased their interest in majoring in physics and helped them prepare for college.



"This was one of the best weeks of my life. I learned so much and it was invigorating to be with so many other kids interested in this field."

"PAN exceeded my expectations, I learned a lot about nuclear physics that I didn't even know that I didn't know beforehand, and I now have a better understanding of how college works and how college research works."

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