

## Physics of the Atomic Nuclei (PAN) Program @ MSU 2006

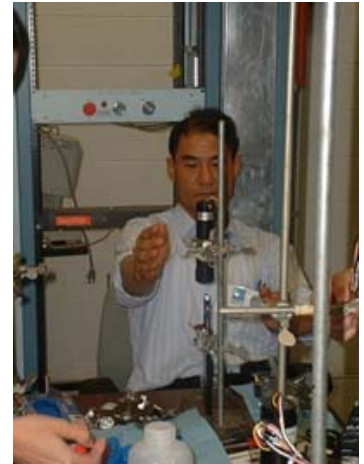


For two weeks in late summer, the NSCL hosted its thirteenth annual Physics of Atomic Nuclei (PAN) camp, an outreach program run by JINA, NSCL faculty and staff. PAN was designed from the start to show students opportunities in nuclear science and give teachers tools and knowledge they can use in the classroom, and this year's program continued that tradition.

Eight American teachers arrived first to learn more about practical ways to include nuclear physics in their curriculum. Three teachers from South Korea joined them as part of the MSU VIPP program, which brings international professionals to campus for educational and cultural exchange. Despite language and cultural differences, the teachers quickly found themselves united by a common purpose: the love of learning. NSCL faculty taught them the basics of nuclear theory and experimentation while offering a glimpse into the future of JINA research. The teachers also enjoyed hands-on experiences with an innovative radioactive decay laboratory and collaborated to construct two cosmic ray detectors.

In the second week, 22 pre-college students joined PAN with a plethora of physics questions and an eagerness to learn. Their education began immediately with lectures on the NSCL, JINA and the history of cosmic ray research. The teachers led teams of students through evaluations after each talk to clarify the topic, and helped them study several radioactive sources in the lab. As a final project, the teams designed their own cosmic-ray experiments using the homemade detectors, then conducted and reported on their research. While their hypotheses didn't always prove true, the students gained valuable experience in the scientific process.

Participants overwhelmingly agreed: they would recommend the program to other students and teachers.



### Related Web Sites:

<http://meetings.nsl.msu.edu/n/PAN2006/2006home.htm>

### Contact:

JINA Outreach  
University of Notre Dame  
(574) 631-8297  
Phys.jinaout.1@nd.edu