

# Physics of Atomic Nuclei

**Teacher Professional Development Workshop – July 27-31, 2015**

## Where

July 27-31, 2015  
SDSU Campus  
Brookings, SD

## Details

Housing and meals will be provided to teachers during the week. In addition teachers will receive a \$500 stipend upon completion of the week at SDSU, and materials/equipment for their classroom. The workshop will be available for two hours of graduate credit (at reduced rates) with another optional credit hour available by taking an online extension of the course focused on the particle astrophysics experiments at the Sanford Lab.

A tentative schedule for the workshop is on the back.

## To Apply

Registration for this workshop will open April 14 and remain open until full or until May 1. Apply now at <http://pan2015reg@questionpro.com>. Space is limited to 16 teachers.

## Questions?

Contact Peggy Norris, Deputy Director of Education, Sanford Underground Laboratory at Homestake

(605)-722-5049, [pnorris@sanfordlab.org](mailto:pnorris@sanfordlab.org)

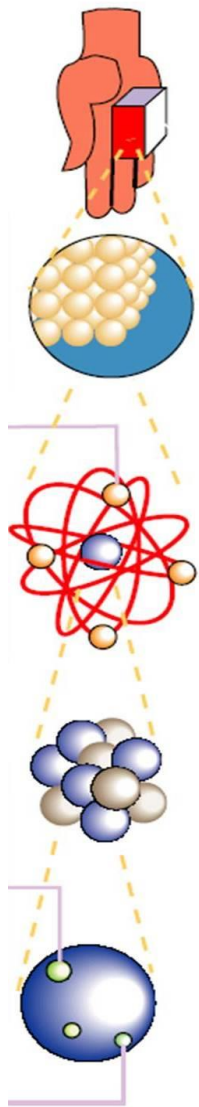
## What

This workshop will focus on development of teacher content knowledge in nuclear science and development and implementation of activities for teachers to use in their classrooms. Nuclear science is an excellent topic to use as a connection between curriculum standards in physical science, chemistry and physics courses, scientific and engineering practices, cross-cutting concepts, the science experiments taking place at the Sanford Underground Research Facility, 'real-world' applications, and rewarding and well-paying STEM careers.

This workshop is sponsored by South Dakota State University (SDSU), Black Hills State University (BHSU), University of South Dakota (USD) and the Sanford Underground Research Facility, and will take place on the SDSU campus in Brookings. The workshop is made possible by a No Child Left Behind grant from the South Dakota Board of Regents.

## Who

Any middle or high school science teacher in the state of South Dakota is eligible to apply.



*This workshop has been developed through a statewide collaboration and is funded by South Dakota Board of Regents.*



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## Tentative Schedule

Day	Content Topic*	
	AM	PM
<b>Monday</b>	Atomic Structure	Forces and Interactions
<b>Tuesday</b>	Basics of Nuclear Science	
<b>Wednesday</b>	Applications	Field trip to Avera Health nuclear medicine facility
<b>Thursday</b>	Radiation in the Environment	Careers
<b>Friday</b>	Assessment	

All topics will include inquiry-based hands- activities intermingled with lectures. The nuclear science content will be co-taught by Dr. Peggy Norris (BHSU/Sanford Lab) and Dr. Rob McTaggart (SDSU), with the use of hands-on activity kits provided by the regional and national chapters of the Health Physics Society, and additional instrumentation available in the physics lab at SDSU or brought from the Sanford Lab. The pedagogy (activity design and implementation as well as lesson plan development) will be facilitated by Ms. Judy Vondruska (SDSU) and Dr. Cathy Ezrailson (USD). Participants will be expected to develop or adapt a lesson plan on one of the content areas for their grade level/subject and incorporating NGSS science and engineering practices.

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