

The Sanford Underground Laboratory's  
4th annual free science festival

# Neutrino Day

Saturday, July 9, 2011

8:30 a.m.-1:00 p.m.

Lead, South Dakota

Thursday, July 7  
SDPB presents a

## Science Café

The Future of Space Exploration  
at the Roundhouse in Lead  
6:30 pm (5:00 social hour)



[www.sanfordlab.org](http://www.sanfordlab.org)

## EVERYTHING'S FREE!

Kids activities  
Science talks  
Hoist-room tours and more

## TALK LIVE

in high-def video  
with scientists  
a mile underground!

Catch a shuttle to the lab at Homestake Visitor Center

160 W. Main Street at the Open Cut

Shuttles start at 8:30 a.m. , then run every 15 minutes all morning



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## **High-def talks with scientists nearly a mile underground**

Talk one-on-one with scientists and technicians working 4,850 feet underground, using the Sanford Laboratory's high-definition videoconference system.

## **Mini-lectures**

Half-hour talks begin on the hour, starting at 9 a.m.

- 9 a.m. Photography underground, where photons are scarce (Steve Babbitt/BHSU)
- 10 a.m. Building mega-caverns bigger than Mount Rushmore (Dr. Bill Roggenthen, SDSMT)
- 11 a.m. Signals from supernovas seen deep in the earth (Dr. Peggy Norris, Sanford Lab)
- Noon The worldwide race for dark matter (Dr. Dan Akerib, Case Western Reserve University)

## **Hoist-room tours**

Get up close and personal with the giant hoists that transport people and equipment up and down a 5,000-foot shaft.

## **Hands-on activities for kids, who will learn about:**

- Cosmic rays
- Stardust
- Nanotechnology and more

## **How to get there**

Catch the free shuttle bus to the Sanford Lab at the Homestake Visitor Center at 160 West Main Street in Lead, at the Open Cut. The first shuttle leaves the Homestake Visitor Center at 8:30 a.m. Shuttles run continuously all morning (about every 15 minutes). The last shuttle returns to the Homestake Visitor Center at 1 p.m.

## **Geology bonus**

While you wait for the bus, learn geology and gold panning at the Homestake Visitor Center from Sanford Lab geologists.

## **SDPB Science Café**

**6:30 p.m. on Thursday, July 7**

### **The Roundhouse restaurant in Lead**

Tom Durkin, deputy director of the South Dakota Space Grant Consortium at the South Dakota School of Mines and Technology, will talk about the end of the space shuttle—the last launch is planned for the next day—and what the future holds for space exploration.

The Lead Area Chamber of Commerce is sponsoring a wine-and-hors d'oeuvres social hour (\$15 cover) from 5:00 p.m. to 6:30 p.m.

Attend live or join online at

[SDPB.org/sciencecafe](http://SDPB.org/sciencecafe) at 6:30 p.m. MDT.

For more information go to [www.sanfordlab.org](http://www.sanfordlab.org) or contact Bill Harlan at 605 722-4025 or at [bharlan@sanfordlab.org](mailto:bharlan@sanfordlab.org).