

THE Drive FOR DUSEL

Homestake - approved location for a Deep Underground Science and Engineering Laboratory

"Gov. Rounds had a vision for this. He was not willing to let any barriers stand in his way."

- Senator John Thune, R-S.D.

Nov. 6 Underground sensors at Homestake show water has risen to 5,600 feet.

2007

Jan 9 The Homestake Collaboration and scientific collaborations representing sites in Colorado, Washington and Minnesota submit S3 "conceptual design reports" to the NSF

April 20-21 The Homestake Collaboration and three other collaborations make presentations to the NSF in Washington.

July 10 Gov. Rounds proclaims that NSF chose Homestake as recommended site for the DUSEL.

Beyond 2007

2008 Experiments at an interim lab at Homestake

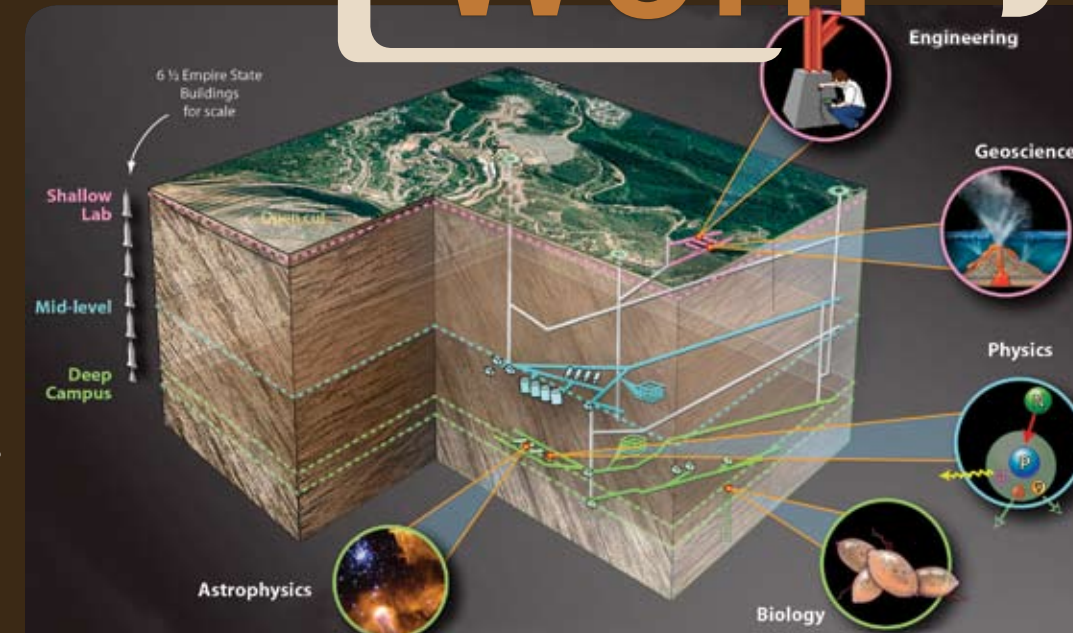
2009 Earliest possible funding by Congress for DUSEL (in fiscal 2010 budget); however, a later date is more likely.

2010 Earliest date construction on DUSEL could begin.

2050 & Beyond Possible lifespan of the DUSEL.

"WE Won!"

Zina Deretsky, National Science Foundation



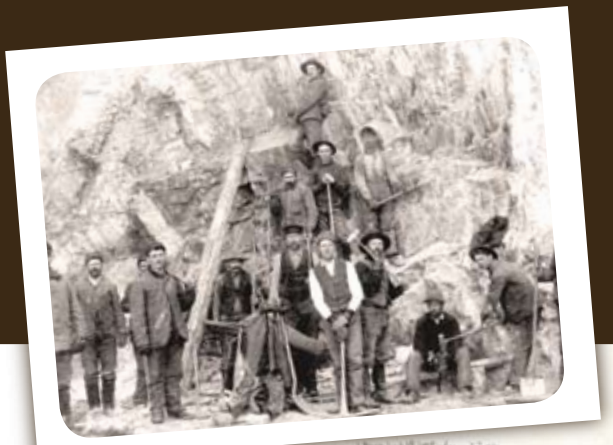
The key events leading to the announcement that the National Science Foundation awarded Homestake gold mine in Lead the National Deep Underground Science and Engineering Laboratory.

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1876-1999

April 9, 1876 Fred and Moses Manuel file the Homestake claim.

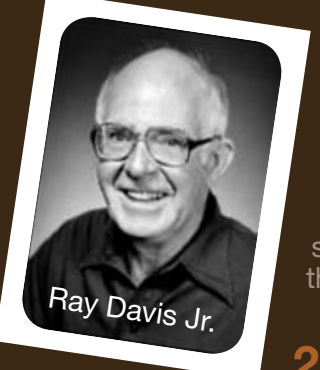
Dec. 4, 1930 Austrian physicist Wolfgang Pauli hypothesizes a subatomic particle later dubbed the "neutrino" or "little neutral one."



Homestake Gold Mine, 1876

1965 Ray Davis Jr. of Brookhaven National Laboratory installs a solar neutrino detector 4,850 feet underground at the Homestake gold mine in Lead. The Homestake rock protects the experiment from background cosmic radiation.

1968 Davis reports a "solar neutrino problem" - that is, solar neutrinos were detected at a lower rate than predicted by the Stanford Model of how the universe works. One explanation: neutrinos change type or "flavor."



Ray Davis Jr.

2000

Sept. 11 Homestake Mining Company announces its underground gold mine in Lead will close at the end of 2001, after 124 years of almost continuous mining

Sept. 21 Ken Lande, Al Mann and Marvin Marschak support Homestake - which is 8,000 feet deep - as the site of a national underground lab.

2001

Jan. 10 Physicists from throughout the nation inspect Homestake underground

March 5 South Dakota Tech president Richard Gowen proclaims "We did it!" after the Bahcall-Lesko committee recommends a national underground laboratory 7,400 feet underground at Homestake.

June 25 Barrick Gold Corp. announces its purchase of Homestake Mining Co.

July 20 Sen. Tim Johnson, D-S.D., pushes a \$10 million grant through a Senate committee to preserve Homestake for use as a lab.

Oct. 18 Sen. Tom Daschle, Gov. Bill Janklow and Homestake officials negotiate a liability compromise.

Dec. 14 The last bucket of ore is mined at Homestake.



2002

Jan. 1 Homestake lays off 80 workers in Lead. The remaining 130 begin closing the mine.

March 29 Homestake Mining Co. agrees to delay flooding the mine by turning off underground pumps, but parent company Barrick Gold remains skeptical it can be protected from liability for an underground lab.

Dec. 10 Ray Davis receives the Nobel Prize in physics for his Homestake neutrino detector, which helped show how the sun works and that neutrinos do have mass.

2003

Feb. 14 Newly elected Gov. Mike Rounds announces another attempt to solve Barrick's liability worries.

April 15 Scientists protest the impending mine flooding at Homestake and Lead Mayor Tom Nelson goes to court to prevent it.

May 30 A National Science Foundation panel of experts names Homestake the best place "by far" for a national underground lab, though the panel urges continued pumping.

June 10 Barrick turns off the pumps at Homestake. The mine begins to slowly fill with water.

July 1 Gov. Mike Rounds creates the Homestake Laboratory Conversion Project.

2004

Jan. 12 Gov. Rounds and Barrick Gold sign an "agreement in principle" for the company to donate the Homestake mine for use as a lab.

Feb. 11 Rounds signs five bills creating the new South Dakota Science and Technology Authority and committing \$14.3 million to the Homestake proposal.

June 15 Physicist Kevin Lesko of Lawrence Berkeley Laboratory now is "principal investigator" for a group of scientists called "the Homestake Collaboration."

2005

Feb. 28 Eight sites, including Homestake, submit to NSF DUSEL site proposals. "Homestake Collaboration" proposes an interim laboratory 4,850 feet underground, that would operate in advance of Homestake DUSEL 7,400 feet underground.

July 21 Homestake and the Henderson mine in Colorado are selected by the National Science Foundation as the two DUSEL finalist sites.



S.D. Legislature approves \$19.9 million

2006

Sept. 19 An agreement between South Dakota and Barrick Gold, Corp is announced. The company will donate the mine for use as a lab. Insurance, an indemnity fund and other mechanisms will protect Barrick from liability.

Oct. 14 The South Dakota Legislature in special session approves \$19.9 million to develop the interim laboratory at Homestake. That brings the state commitment, counting a \$10 million federal HUD grant, to \$46.5 million.

2006

Jan 12 The water level at Homestake reaches a "level" 6,200 feet underground.



Denny Sanford donates to S.D. Science and Technology Authority

June 26 Sioux Falls Banker and philanthropist Denny Sanford announces he would donate \$70 million to the South Dakota Science & Technology Authority to help develop an underground laboratory at Homestake. That brings the total state DUSEL package to \$116.5 million.

Sept. 29 The NSF re-opens the DUSEL competition to other sites and sets a Jan. 9, 2007, deadline. Proposals from Washington and Minnesota will be offered.