

Black Hills State University
2012 Annual Report

QuarkNet Center Name, number of years in the program
Black Hills State University, Year 4

List of faculty/staff/student participants including the role each played

Kara Keeter: BHSU Faculty, *physics mentor*

Jaret Heise: Science Liaison Director, Sanford Laboratory, *physics mentor*

Brianna Mount: BHSU postdoc, *assistant organizer*

Jared Thompson: BHSU research staff, *assistant organizer*

LeAnn Harrington and Mallory Wilde: *assistants*

Students who were not part of the BHSU QuarkNet program but who interacted with the high school teachers during the week they were here:

Greg Serfling: undergraduate student, SDSM&T

Joshua Harris: undergraduate student, BHSU

Kelcy Brunner: recent graduate, continuing on to grad school

Description of the teacher participants

Brian Lowery, Tea H.S., Tea, SD – Lead Teacher*

**Brian has accepted a position at the University of Sioux Falls and no longer is classified as a high school teacher. He will continue to help out as he can.*

Chad Ronish, Hill City H.S., Hill City, SD – Lead Teacher

Rose Emanuel, Lead-Deadwood H.S., Lead, SD

LuAnn Lindskov, Timber Lake H.S., Timber Lake, SD

Mechelle Powers, Custer Middle School, Custer, SD

John McEnelly, Chamberlain H.S., Huron, SD (from Summer 2009 through Spring 2011)

Steve Gabriel, Spearfish H.S., Spearfish, SD (from Summer 2011)

Deirdre Peck, Aberdeen Central H.S., Aberdeen, SD (from Summer 2012)

Description of the student participants and other personnel (if applicable)

n/a

Activities for 2011/2012

The BHSU QuarkNet Center hosted two Masterclasses in March, 2012. They were held at the Sanford Underground Research Facility (SURF). Four teachers participated (Rose Emanuel, LuAnn Lindskov, Steve Gabriel, and Chad Ronish) bringing a total of about 30-40 students.

One new teacher (Deirdre Peck) joined the Center for the Summer 2012 Workshop, with Rose Emanuel, LuAnn Lindskov, and Brian Lowery also participating. After two days of learning (for the new teacher) and review of the use of FNAL's eLab data analysis program and of trouble-shooting and plateauing CRMDs, the teachers and Kris Whelan, Kara Keeter and Jaret Heise went to the 300' level (walk-in) at SURF and took CRMD data at varying "depths" of rock overburden.

The remainder of the five days will be spent during the school year in following up with CRMDs and in preparation for the next Masterclasses.





