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Date: December 9, 2005 1:27:40 PM PST
To: hlcp@state.sd.us
Cc: Kevin Lesko <KTLesko@lbl.gov>, cdms_exec <cdms_exec@phantom.phys.cwru.edu>
Subject: Response to Request for Letters of Interest at the Homestake Laboratory

South Dakota Science and Technology Authority
P.O. Box 8329
Rapid City, SD 57709

Dear SDSTA Members,

The SuperCDMS collaboration expresses interest in science at the Homestake Laboratory. Our experiment is a search for nuclear recoils in response to Weakly Interacting Massive
Particles (WIMPs), thought to comprise the dark matter bound to our Milky Way Galaxy. Our goal is to run as much as 1000 kg of germanium detectors at cryogenic temperatures (about 50 milliKelvin) for several years at a site deep enough to avoid background from cosmic-ray induced processes.

We have been endorsed by the SNOLAB External Advisory Committee for running SuperCDMS at SNOLAB. Since this endorsement, we received a formal offer for space and support at SNOLAB from David Sinclair, the SNOLAB Director. To secure this offer of space and support, Dr. Sinclair requested that we confirm our intention to carry out the experiment at SNOLAB (contingent, of course, on acquiring funding agency support). We gave him that confirmation on Oct 23, 2005, and are in the process of working with our funding agencies to secure the resources to build and conduct a 25-kg experiment.

In broad terms, our requests to SNOLAB include an experimental space of dimension 20'Hx25'Wx50'L, power of 75 kW, additional staging space, a fresh air supply to mitigate radon, access to clean-room space in the surface building, the ability to use LHe and LN, and emergency access as required to address cryogenic issues.

In response, SNOLAB has agreed to provide technical liaison support from a staff scientist, "rent free" underground and surface lab space, handling and transport of clean material into the lab, a class 2000 clean room environment, and utilities (including items such as power, compressed air, cooling, water, and ultra-pure water). Beneficial access to SNOLAB is expected in 2007.

We would like to keep open the lines of communication with SDSTA as plans for the Homestake Laboratory are developed. We are also beginning to consider SuperCDMS plans beyond the 25-kg phase and these may involve DUSEL.

We appreciate your efforts on behalf of underground science.

For the SuperCDMS Collaboration,

Blas Cabrera, Spokesperson
Dan Akerib, Co-Spokesperson
Bernard Sadoulet, Executive Board Chair
Dan Bauer, Project Manager

P.S. Below is a list of SuperCDMS institutions and collaborators
(group leaders are indicated with a *)

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