



March 3, 2008

TO: Members of the Underground Science Community

FROM: Jose Alonso, Director, Sanford Laboratory at Homestake

SUBJECT: Call for Proposals

Dear Colleagues:

As you no doubt know, on July 10, 2007, NSF announced its decision of selecting Homestake, in Lead, SD, as its preferred site for DUSEL, the Deep Underground Science and Engineering Laboratory. Kevin Lesko has kept you well informed regarding the steps, timetable and forward progress in the NSF-MREFC process, that is expected to provide substantial money to construct new caverns and fund what is referred to as the "Initial Suite of Experiments" or ISE. The Workshop in Washington DC in early November, 2007, and the upcoming Workshops in Lead this April 21 -26 ([http://homestake.sdsmt.edu/April\\_20-26/meeting.htm](http://homestake.sdsmt.edu/April_20-26/meeting.htm)) have been designed to assist the community to focus on the ISE process. We look forward to seeing you at these workshops!

In the meantime, with funding provided by the State of South Dakota and a most generous private donor, the Sanford Laboratory at Homestake has been established, and we are working to re-open the Homestake mine. Our goal is to make areas within the mine, down to the 4850 level, available for what has become known as the "Early Implementation Program" (EIP) for experiments, R&D, and other relevant activities. These activities are totally separate from the ISE program in both time frame and funding scale, but could provide an opportunity for groups, particularly those planning to mount major programs at the DUSEL, to conduct important R&D work or preliminary experiments at the Homestake site.

In 2006, the Homestake proponents issued a call for Letters of Intent (LOIs) as expressions of interest in participating in the DUSEL program. These letters were evaluated by a Program Advisory Committee (chaired by Frank Sciulli – physics, and Derek Elsworth – geo/bio), and a number of these LOIs were flagged as possible candidates for possible participation in an EIP.

In the intervening period, much has happened; in particular we are making excellent progress towards our goal of making the mine ready for experiments. The first geology experiments are already beginning, and the first physics experiment will be installed this summer/fall. We are still in the process of getting pumps started to drop the water level, but recent progress has been excellent and we have a high degree of confidence in the present timetable of serious preparation work at the 4850 level by this summer.

We are sure that the status within the research community has not been static either.

As a result, we would like to poll you for your current interest towards participation in the EIP. If you fall into any of the three categories below, and would like to be considered for the EIP, we would like to hear from you:

- If you previously submitted an LOI and were flagged as a possible EIP candidate,
- If you previously submitted an LOI and were not flagged for EIP candidacy but would now like to be considered for the EIP,
- If you did not previously submit an LOI but would like to be considered for the EIP.

At the present time, we anticipate DUSEL funding to not begin before federal FY2012, so the period of activity for the EIP will extend from now until at least the beginning of calendar 2012. If you wish to participate in the EIP for the near term, please let us know now. As time continues, we anticipate similar Calls to the present one, on approximately a yearly basis.

We are re-constituting the Program Advisory Committee to review your proposals; to help us, the Sanford Laboratory, define a scientific program suitable for our capabilities and resources, and which can help the research community prepare for maximum effectiveness in a long-range DUSEL program. The Advisory Committee will meet at a time to be established during the April 21-25 Workshops in Lead.

Please submit this month a *brief* proposal, with sufficient information to allow our Advisory Committee to perform an informed evaluation of the scientific goals, methods and probability of success in achieving these goals. Specifically, the proposal should include:

- Project title
- PI, team members, institutions, and connections with other collaborations;
- Scientific goals and relations with other programs;
- Experimental systems, and specific hazards (cryogenics, chemicals, pressure, electrical);
- Environmental needs (depth, floor space, ceiling height, other specific requirements);
- Funding status;
- Timetable (readiness for deployment, duration of experiment).

Please submit this information (electronically or in paper):

BY April 2, 2008

EITHER in paper form TO:

Dr. Jose R. Alonso, Director,  
Sanford Laboratory at Homestake  
630 East Summit Street  
Lead, SD 57754,

OR electronically TO:

<Jose.Alonso@state.sd.us>

For further information, please contact me via the e-mail address above, or by phone at (605) 722-8650.

Best regards,

A handwritten signature in blue ink that reads "Jose R. Alonso". The signature is written in a cursive style with a long, sweeping underline that extends to the right.

Jose R. Alonso, Director  
Sanford Laboratory at Homestake