

#	Letters of Interest - Title	Discipline	Principal Investigator	Lead Institution
33	Cloud physics facility and experiments for an underground laboratory	Atmospheric sciences	Dr. John Helsdon	SDSMT
57	Understanding the complexities of long term data storage in space exploration	Data storage	Dr. William Figg	Dakota State University
42	Cosmic ray studies	Earth Sciences	Dr. Joseph Wang	LBNL
41	Couple process collaboration for large block experiments	Earth Sciences	Dr. Joseph Wang	LBNL
38	Ecology/geomicrobiology collaboration for microbe evolution	Earth Sciences	Dr. Joseph Wang	LBNL
37	Geochemistry collab. for the geochemical evolution of fluids in the Homestake hydrologic system	Earth Sciences	Dr. Joseph Wang	LBNL
39	Geophysics collaboration for imaging	Earth Sciences	Dr. Joseph Wang	LBNL
36	Hydrogeology Collaboration on flow path delineation and modification	Earth Sciences	Dr. Joseph Wang	LBNL
40	Rock Mechanics and geoen지니어링 collaboration for excavation research	Earth Sciences	Dr. Joseph Wang	LBNL
83	Earth Science Experiments at Homestake - Focused studies on geologic CO ₂ Sequestration	Earth Sciences	Dr. Kurt Oldenburg	LBNL
60	Long term seismic and seismologic monitoring of stress and fluid dynamics in the upper crust	Earth Sciences	Dr. Serge A. Shapiro	Freie Universitaet Berlin
74	Surface facility planning and design for the Homestake Mine	Education & Outreach	Dr. Jennifer Karlin	SDSMT
5	DUSEL Education & Conference Center	Education & Outreach	Dr. Larry D. Stetter	SDSMT
27	Homestake Outreach Program (HOP)	Education & Outreach	Dr. Matthew Miller	SDSU
50	Educational outreach support infrastructure	Education & Outreach	Dr. Omar El-Gayar	Dakota State University
66	Center for risk, the community and the environment	Education & Outreach	Dr. Peter Young	The RedWater Group
16	Workshops	Education & Outreach	Dr. Susan M. Pfiffner	University Of Tennessee, Knoxville
25	Developing of a robotic sampler for underground and confined environments	Engineering	Dr. Gautam Pillay	SDSMT
17	Effects of Cosmic Rays on the Soft Error Rate of Semiconductor Memory Chips at Ground Level	Engineering	Dr. Li Chen	SDSMT
13	New Paradigms in Sensing	Engineering	Dr. Steven Glaser	University of California - Berkeley
84	Precambrian Research Center	Geology	Dean Peterson	University of Minnesota
44	Breccia evolution associate with degassing of tertiary veins and dikes at Homestake	Geology	Dr. Alvis Lisenbee	SDSMT
12	Hydrologic Instrumentation of the Homestake DUSEL	Geology	Dr. Arden Davis	SDSMT
29	Analysis of soil-like materials in the mine	Geology	Dr. Bruce Bleakley	SDSU
18	Controls on World-Class Homestake Gold Mineralization	Geology	Dr. Colin Paterson	SDSMT
46	Detailed geological mapping of the Homestake mine area	Geology	Dr. Dean Peterson	University of Minnesota - Duluth
45	Development of a 3D geological model of the Homestake mine area	Geology	Dr. Dean Peterson	University Of Minnesota - Duluth
9	Hard Rock Underground Mine Mapping & Surveying	Geology	Dr. Diane Wolfram	Montana Tech
10	Partitioning of CO ₂ , H ₂ O, gold and trace metals between synformal and antiformal fold hinges	Geology	Dr. Diane Wolfram	Montana Tech
62	Deep fracture mapping at DUSEL using acoustic techniques	Geology	Dr. Gautam Pillay	SDSMT
68	Crustal assimilation of volatile evolution in thuyolite and phonolite dikes	Geology	Dr. Genet Duke	Dr Genet Duke Collaboration
65	Coupled mechanical-hydrological behavior of fractured rock mass	Geology	Dr. Herb Wang	University of Wisconsin
47	Close range remote sensing for mapping of rock in underground excavations	Geology	Dr. Joseph Dove	Virginia Tech
6	Determination of Water Levels & Stress Release during Dewatering	Geology	Dr. Larry D. Stetter	SDSMT
24	Establishing the Physical Footprint for Future Geoscience Research at DUSEL	Geology	Dr. Larry D. Stetter	SDSMT
20	Role of Iron Formations in the Making of Giant Gold Deposits	Geology	Dr. Nuri Uzuntar	SDSMT
21	Thermal History of Homestake Mine	Geology	Dr. Nuri Uzuntar	SDSMT
88	Post-glacial warming in northern high-latitude regions	Geology	Dr. Will Gosnold	University of North Dakota
11	Developing an Internet-accessible database of 3D geologic and engineering data	Geology	Maribeth Price	SDSMT
85	LIGO - Preliminary inquiry	Gravity Wave	Jay Marx	Cal Tech
19	Low Radioactivity Measurement Laboratory	Low Backg. Counting	Dr. Ila Pillalamarri	MIT
73	A longitudinal study of the health of homestake lab personnel exposed to the 4850 environment	Medicine	Dr. Jeffrey A Henderson	BH Center Amer. Indian Health
14	Effects of Ultraviolet Radiation Levels on Human Cells	Microbiology	Dr. Betsy Sutherland	Brookhaven National Laboratory
28	Bioprospecting	Microbiology	Dr. Bruce Bleakley	SDSU
32	Establishing baseline data for microbial populations of the mine before and after dewatering	Microbiology	Dr. Bruce Bleakley	SDSU
81	Evolution of Autotrophy	Microbiology	Dr. Bruce Bleakley	SDSU
70	Microbiological cultivation, community metagenomics, nanogeoscience, and stable isotope analysis	Microbiology	Dr. Eric Roden	University of Wisconsin
30	Biological effect of low levels of radiation-Health Physics	Microbiology	Dr. Robert McTaggart	SDSU
53	Investigation of microbial diversity in subsurface ecosystems	Microbiology	Dr. Sookie S. Bang	SDSMT
15	Microbial Evolution	Microbiology	Dr. Susan M. Pfiffner	University of Tennessee, Knoxville
77	Impact of subsurface microbial activity on the corrosion and deterioration of metallic infrastructure	Microbiology	Dr. T. C. Onstott	Princeton University
75	Impact of subsurface microbial activity on the physical and chemical properties of geological form.	Microbiology	Dr. T. C. Onstott	Princeton University
76	Large scale vs. small scale transport of microorganisms and multi-phase CHO fluids	Microbiology	Dr. T. C. Onstott	Princeton University
80	Limits of life in the biosphere	Microbiology	Dr. Tom Kieft	New Mexico Tech
78	Deep Coupled Process Laboratory	Microbiology	Dr. Tommy Phelps	Oakridge National Laboratory
79	Ecosystem biochemistry transitioning from Near-Surface to Deep Earth Ecosystems	Microbiology	Dr. Tommy Phelps	Oakridge National Laboratory
4	Mine Engineering & Management Related Activities	Mining	Dr. Gautam Pillay	SDSMT
86	Liquid Argon Detectors - Preliminary Inquiry	Physics	Bonnie Fleming	Yale
8	Plan for Near Future of High Energy Neutrino Physics at Homestake	Physics	Dr. Al Mann	University Of Pennsylvania
22	Super CDMS	Physics	Dr. Dan Akerb	Case Western
63	Directional recoil identification from Tracks (Drift)	Physics	Dr. Dan Snowden-Ifft	Occidental College
56	Mini-CLEAN	Physics	Dr. Daniel N. McKinsey	Yale
52	Study of a LANNDD of 100kTon at Homestake DUSEL	Physics	Dr. David B. Cline	UCLA
23	Determination of Diurnal changes in the rotation rate of the earth	Physics	Dr. Gautam Pillay	SDSMT
49	EXO - the enriched xenon observatory for neutrino-less double-beta decay	Physics	Dr. Giorgio Gratta	Stanford
58	R&D and physics with a 9m ³ gaseous time projection chamber	Physics	Dr. Giovanni Bonvicini	Wayne State University, Detroit, MI
51	Low-alpha lead and the cosmic-ray equivalency factor	Physics	Dr. Glenn I. Lykken	University Of North Dakota
48	ZEPLIN - a multi ton scale liquid xenon dark matter direct search program	Physics	Dr. Hanguo Wang	UCLA
72	SIGN - A high-pressure, gaseous-neon-based Dark Matter Detector	Physics	Dr. James T. White	Texas A & M University
61	The Majorana Neutrinoless Double Beta-Decay Experiment	Physics	Dr. John Wilkerson	University of Washington
54	Initial low background counting facilities for Homestake	Physics	Dr. Kevin Lesko	LBNL
71	A Geoneutrino experiment at Homestake	Physics	Dr. Nikolai Tolich	LBNL
64	High-current ion accelerator	Physics	Dr. Paul Vetter	LBNL
69	Low energy neutrino spectrometer	Physics	Dr. Raju Raghavan	Virginia Tech
59	XENON100/1000	Physics	Dr. Richard Gaitskill	Brown University
26	Homestake Electrical Engineering Laboratory (HEEL)	Physics	Dr. Robert McTaggart	SDSU
31	Homestake Neutrinos (offer to collaborate)	Physics	Dr. Robert McTaggart	SDSU
7	Search for Neutron-Antineutron Transition at Homestake	Physics	Dr. Yuri Kamyskov	University Of Tennessee, Knoxville
67	Threshold Dark Matter - Preliminary Inquiry	Physics	Juan Colar	The University of Chicago
55	Large block (Pillar) test to study the failure of rock - rock strength and earthquake mechanics	Rock Mechanics	Dr. Derek Elsworth	Penn State
34	Fracture network characterization at Homestake	Rock Mechanics	Dr. Matthew Mauldon	Virginia Tech
35	Risk Assessment of underground space modifications at Homestake	Rock Mechanics	Dr. Matthew Mauldon	Virginia Tech
67	Rock bolt research, backfill testing, large diameter excavation research	Rock Mechanics	Dr. R.L. McNeamy	Montana Tech
43	Characterization and mechanics of faulting and rock fracture at homestake mine	Rock Mechanics	Dr. Stephen Martel	University of Hawaii
2	Scale Effects In Rock Mechanics	Rock Mechanics	Dr. W.G. Pariseau	University Of Utah
3	Stress & Rock Properties of the Yates member of the Poorman Formation	Rock Mechanics	Dr. W.G. Pariseau	University Of Utah
1	Time Dependent Deformation	Rock Mechanics	Dr. W.G. Pariseau	University Of Utah
82	General Interest	Various	Dr. Harry Milley	PNL