

March 30, 2001

To Whom It May Concern:

We deeply appreciate the recent work of the (Ad Hoc) Bahcall Underground Laboratory Committee, and strongly support their recommendation to establish a National Underground Laboratory (NUL) for conducting leading edge non-accelerator high energy/particle physics research. We believe that the NUL must satisfy four major requirements:

1. Low background from naturally occurring radioactive materials,
2. Low cosmic ray background,
3. Accessibility, long term stable operation, experimental support,
4. Cost effectiveness.

A low ambient radioactive or cosmic ray background will be required by supernovae neutrino detectors such as the proposed OMNIS detector, future Neutrino Factory beam detectors, proton decay experiments, double beta decay experiments, and dark matter searches. The Neutrino Factory could be at FNAL, BNL, CERN, Geneva, Switzerland, or at the JHF in Japan. A very low cosmic ray background is of particular importance to solar neutrino experiments, which are thus naturally suited to deep locations such as the Homestake, South Dakota site, and San Jacinto site.

Recognition of the four major criteria above, plus strong agreement with the Bahcall Committee's assertion that an operating site should be established in as timely a manner as possible, leads us to reiterate our interest in using the Waste Isolation Pilot Plant (WIPP) Site at Carlsbad, New Mexico for leading edge Astroparticle Science and Elementary Particle Physics. [Now: Carlsbad Underground National Laboratory, CUNL.] We believe that the CUNL site is an ideal location as an important component of an U.S. NUL system for the following reasons:

1. The existing water and power infrastructure, and a heavy duty elevator system,
2. The DOE has already commissioned a detailed Environmental Impact Assessment that returned a favorable judgment for establishing an underground laboratory,
3. The enthusiasm and support of the CUNL staff and Carlsbad community for a world class scientific laboratory,
4. The low ambient radioactive background which is, in fact, much lower than other proposed sites,
5. The ease of construction of large projects such as a supernova, proton decay or neutrino factory detectors,
6. Ownership of the site by the U.S. Government.

In any case, we see a need and support for more than one type of underground facility, especially when one of them (CUNL) already exists, has great accessibility and vast infrastructure support.

- Prof. David B. Cline, University of California, Los Angeles
- Dr. Kevin Lee, University of California, Los Angeles
- Prof. Ervin Fenyves, University of Texas, Dallas
- Associate Prof. William Burgett, University of Texas, Dallas
- Prof. John G. Learned, University of Hawaii
- Prof. Peter F. Smith, Rutherford Appleton Laboratory, UK
- Prof. Richard Boyd, Ohio State University
- Prof. Alexander Murphy, Ohio State University
- Prof. Wayne Vernon, University of California, San Diego
- Dr. James R. Wilson, Lawrence Livermore National Laboratory
- Dr. Stirling A. Colgate, Los Alamos National Laboratory
- Dr. Todd Haines, Los Alamos National Laboratory
- Dr. James T. White, Texas A & M University
- Associate Prof. Daniel Suson, Texas A & M University
- Prof. Adam Burrows, The University of Arizona
- Prof. David Caldwell, University of California, Santa Barbara
- Ludwig Debraeckeeler, Assistant Professor, DUKE University, Spokesperson Majorana Project
- Prof. Bernard Sadoulet, University of California, Berkeley, and Director of INPAC
- Prof. Richard Arnowitt, Texas A&M University
- Prof. Kirk McDonald, Princeton University
- Prof. George Fuller, University of California, San Diego
- Prof. Frank Avignone, University of South Carolina, Columbia
- Prof. Lawrence Sulak, Boston University
- Prof. Lucien M. Cremaldi, University of Mississippi-Oxford
- Assoc. Prof. Donald J. Summers, University of Mississippi-Oxford
- Dr. David A. Sanders, University of Mississippi-Oxford