

# VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY

DEPARTMENT OF PHYSICS

February 28, 2005

Dear Kimballton Principal Investigators,

My field of research is experimental nuclear physics, with a current emphasis on parity-violating electron scattering as a probe of nucleon strangeness and as a testing ground for the Standard Model. Due to my long-standing interest in fundamental symmetries, my future research could naturally evolve into a program involving neutrinos and their properties. There is every current indication that neutrinos could continue to yield the most interesting new developments in particle physics over the next couple of decades. Shifting to the study of neutrinos would also make sense because of the presence of the already existing neutrino physics group led by Professors Raghavan and Vogelaar here at Virginia Tech. The Kimballton site offers a suitable location for this research to be pursued, and I am working as a member of the Kimballton team to help make this a reality.

One of the features of the Kimballton site that appeals to me very much (besides the obvious physical proximity) is the fact that there are existing drive-in access caverns at depth. If DUSEL were to come here one could start small-scale experiments and prototyping of larger experiments immediately, thus getting graduate students and postdocs involved in underground activities right away. Another personally appealing thing to me is the fact that the close proximity of the lab would bring in an influx of visiting scientists in physics and other fields of science and engineering. In particular, I look forward to working during the upcoming S2 to insure that the proposed DUSEL-Kimballton laboratory can accomodate the vast majority of the exciting physics activities that have come out of the S1 process. This will insure that the lab is designed such that the national and international physics community can stage the most exciting underground experiments here.

Sincerely,  
Mark L. Pitt  
Associate Professor of Physics