From: Staffin, Robin [mailto:Robin.Staffin@science.doe.gov]
Sent: Tuesday, November 29, 2005 8:08 AM
To: Abe Seiden; 'weerts@anl.gov'; 'Drell, Persis S.'; Dorfan, Jonathan (SLAC); 'samaronson@bnl.gov'; Oddone, Pierre (FNAL); 'jlsiegrist@lbl.gov'; 'JNMarx@lbl.gov'; 'Geneb@hep.upenn.edu'; 'meyers@princeton.edu'; 'holmes@fnal.gov'; 'mont@fnal.gov'; 'rocky@fnal.gov'
Cc: Byon, Aesook
Subject: Approvals of Mission Need Statements

This is to inform the High Energy Physics community that the Director of the Office of Science, Dr. Ray Orbach, has approved the Mission Need Statements for the following potential new medium scale initiatives.

- A generic accelerator-based electron neutrino appearance experiment to measure neutrino mixing and to probe the neutrino mass hierarchy
- A generic reactor-based neutrino detector to precisely measure neutrino mixing (θ_{13})
- A generic ground-based dark energy experiment
- A generic neutrinoless double beta decay experiment to probe the Majorana nature and an absolute mass scale of neutrinos

As announced previously, the request for the approvals of the following two potential new medium scale initiatives will shortly follow:

- A high-intensity neutrino beam (Super Neutrino Beam) for neutrino CP-violation experiments
- A generic underground dark matter experiment to search for direct evidence of dark matter

Note that an approval of Mission Need (commonly referred as CD-0 approval) does not equate to an approval to proceed with the project, although it is a required step in the approval process for any new major facility or experiment. Rather, It is an expression of intent by the Office of High Energy Physics to the Department of Energy that we plan to pursue these specific scientific topics and/or facility options.

The potential projects may be located in the U.S. or in other countries; and there may be several options for the technology chosen to carry out the experiment or to build the facility. If these initiatives move forward, decisions such as technology choice and siting will come later in the approval process. The DOE's project approval process has been moving in parallel with scientific advisory processes (SAG, P5, HEPAP etc) in order to be ready to move forward expeditiously. The recommendations from the scientific advisory processes will be one of key inputs in next steps to come.

We look forward to continuing interactions with the High Energy Physics community to bring these exciting scientific opportunities to fruition.

Robin Staffin
Associate Director for High Energy Physics
Office of Science