

June 16, 2009

Draft Charge for the June 2009 PAC meeting in Aspen

This meeting of the Physics Advisory Committee (PAC) will occur with a rather well-defined roadmap for Fermilab and the US HEP program. The Laboratory and the DOE have made starts on major projects, some of which have had Critical Decision milestones approved by the DOE, and others of which are awaiting such steps. The added one-time funding of the American Recovery and Reinvestment Act is helping accelerate some project timetables relative to what we expected just a few months ago. While we do not have assurance about the funding in the more distant future, there are opportunities beyond a minimal program, and the Laboratory continues to receive inquiries about possible additions. These will be the focus of the meeting this summer.

As usual for the summer PAC meeting, all sessions will be in executive format. In several presentations to the PAC, the Laboratory will review the current research and operations, as well as the above developments and prospects for funding in the future. In addition, there have been a number of ad hoc committees established to consider elements of the Long Baseline Neutrino Experiment (LBNE) program and other parts of the Intensity Frontier at Fermilab. The reports from these efforts

Interim Report from Project-X Research Program Task Force on Rare Processes
(Bob Tschirhart, Chair)

Report of the Fermilab Water Cerenkov Detector Design Task Force
(Peter Shanahan, Chair)

Executive Summary of Major NuMI Lessons Learned: A review of relevant meetings of Fermilab's DUSEL Beamline Working Group
(Jeffrey Appel, Chair)

have been made available to the PAC, and will be summarized in several of the presentations. We will appreciate any comments the PAC may wish to make on these efforts and any of these presentations and other material made available.

Since the last PAC meeting, the Laboratory has received the planning document

Fermilab Center for Particle Astrophysics: Strategic Plan 2009
(Craig Hogan, Director, Dan Bauer, Deputy Director, and FCPA Staff)

and a proposal, "The Fermilab Holographic Interferometer" P-990, for an experiment to measure the holographic indeterminacy of spacetime (Craig Hogan, Spokesperson). Along with the proposal, two supporting documents have been received and are available to the PAC. We request comments from the PAC on the FCPA strategy plan and, while the

proposal was received too late to obtain detailed impact statements from the affected Divisions of the Laboratory, we would appreciate having an initial discussion on this proposal. In particular, we would like comments on the physics interest in the measurement, the appropriateness of the proposed technique, the relationship to other possible efforts, and suitability of the experiment to be part of the Fermilab program.

In addition to the above proposal, the Laboratory has received several documents in various forms about future options. These have also been made available to the PAC, and include:

P-986 Medium-Energy Antiproton-Physics, Addendum 2: Physics Studies
(Dan Kaplan, Spokesperson)

P-975 NuSOng
(Janet Conrad and Peter Fisher, Spokespeople)

- (1) Terascale Physics Opportunities at a High Statistics, High Energy Neutrino Scattering Experiment: NuSOng
- (2) QCD Precision Measurements and Structure Function Extraction at a High Statistics, High Energy Neutrino Scattering Experiment: NuSOng

EOI to Build a MiniBooNE Near Detector: BooNE
(Bill Louis)

Renaissance of the ~1 TeV Fixed-Target Program
(Kregg Arms and Alan Schwartz)

Again, we would appreciate any comments the PAC may have on any of these topics.