Physics Advisory Committee

November 4-6, 2010

Draft Charge

V2 – (October 28, 2010)

The focus of this meeting of the Physics Advisory Committee (PAC) will be on five new proposals received by Fermilab. These include:

COUPP-500 1-Ton Scale Detector Experiment (P-1009, J. Collar)

TApAS: Medium-Energy Antiproton Experiment (P-986, D. Kaplan)

MIPP-II (P-960, R. Raja)

SciNOvA (P-1003, M. Messier/R. Tayloe)

MiniBooNE antineutrino run extension (E-944, R. Van de Water)

None of these is entirely new to the PAC, several having been seen as Letters of Intent or Expressions of Interest. Among the five proposals, MiniBooNE's is a request for extending their run significantly. The other four proposals all involve new experiment detectors.

Given the proposal to extend Run II for three additional years and expected budgetary implications, we do not anticipate that it will be possible to approve any new efforts at this precise time. However, we owe it to proponents to give them as much guidance as possible under the circumstances. Thus, we ask the PAC to comment and make its recommendations separately under assumptions of (1) no budgetary issues and (2) if the Fermilab budget is severely constrained over the next four years.

Given the number of such items on the agenda, we have limited the time for status reports on much of the current program to allow significant time for discussion of the above items.

For each of the proposals received, we ask the PAC to make comments and recommendations under the two scenarios described previously, and to comment specifically on the following issues:

1. Is the science in the proposal interesting and/or compelling?

2. Is the technique proposed appropriate for, and likely to be capable of reaching the physics goals of the experiment?

3. What is the competition for reaching the physics goals of the proposed experiment? Does the proposed experiment have particular advantages or disadvantages relative to the competition?

4. What is needed to make such an experiment successful?