

**Physics Advisory Committee**  
July 23-25, 2014

CHARGE

In May 2014 the Particle Physics Project Prioritization Panel (P5) released its report "*Building for Discovery: Strategic Plan for U.S. Particle Physics in the Global Context.*" The laboratory has already begun to adjust its program and priorities to align with the P5 recommendations. An assessment of what the laboratory must do, and what resources are needed, to fully implement the P5 plan, has also begun.

The PAC is asked to look at the planned evolution of the laboratory program, and at the actions being taken to align the program with the P5 plan, and to comment on whether the laboratory is on-track with the realignment, and whether any further actions are recommended to better align the program with the P5 plan.

More explicitly, the PAC is asked to give advice on the following:

**1. Alignment with the P5 Plan**

Are appropriate actions being taken to align the laboratory program with the P5 recommendations?

Are there additional actions that can be taken to better align the program?

Is the realignment of the program likely to result in any consequences that the Director should pay special attention to?

**2. Evolution of the process**

What would be the consequences of having a national particle physics committee, and what role should the PAC have if this new committee is formed?

Should the Fermilab Stage 1 and Stage 2 approval process be modified to better align with the overall national approval process for small-, mid-, and large-scale projects?

### **3. The future neutrino program**

Is the planned process that takes us from LBNE to LBNF appropriate and can it be strengthened?

Is the physics motivation for an SBNE program aimed at resolving the origin of the various neutrino anomalies still strong?

Is the planned process for arriving at a short-baseline program appropriate and can it be strengthened?

### **4. Alignment of the particle-astrophysics program**

Are the plans of the Center for Particle Astrophysics well aligned with the P5 recommendations?

Are the right steps being taken to ensure appropriate leadership roles of Fermilab scientists in the future national particle-astrophysics program?

### **5. Other**

The Director would welcome any other comments the PAC has on any of the topics presented, or on other issues beyond the topics presented.