

Fermilab Long Range Planning Committee

Charge to the Committee

Charge to the Fermilab Long-range Planning Committee

Particle physics stands at the threshold of a new era of discovery, made possible by experiments now operating or starting up in the next few years. As the largest U.S. laboratory dedicated to High Energy Physics, Fermilab has a special responsibility to optimize the opportunities for making new discoveries about the nature of matter, energy, space, and time.

The 2001-2 HEPAP Subpanel on Long-Range Planning for U.S. High Energy Physics articulates the goals of the field well. They recommend “that the United States take steps to remain a world leader in the vital and exciting field of particle physics, through a broad program of research focused on the frontiers of matter, energy, space, and time.” The Subpanel also recommended that the U.S. participate in the linear collider, wherever it is built in the world, and that the U.S. prepare to bid to host such a facility. Finally, the HEPAP Subpanel argued persuasively that to address the range of compelling scientific issues the field needs a broad range of experimental strategies and techniques.

I would like the Long-range Planning Committee to develop in detail a few realistically achievable options for the Fermilab program in the next decade under each possible outcome for the linear collider. The goal in developing each option should be to optimize the opportunities available at Fermilab in this period for high energy physicists to answer the most important questions in our field. The options should be guided by the priorities for the field as laid out in the HEPAP Subpanel and in the HEPAP response to the Office of Science on the facilities plan.

The committee should develop scenarios for each of the two cases spelled out by the HEPAP Subpanel.

1. A linear collider project will be built here, starting late in this decade with international support and organization.
2. The linear collider will be built offshore with substantial participation from U.S. High Energy Physics.

In either case, you should make the following additional assumptions.

1. Fermilab will have a central role in an active U.S. research program at the LHC, both as host of the US-CMS collaboration and as developer of accelerator upgrade plans.
2. Fermilab will carry out the presently approved program of experiments following approval from the national program.

The context for the plan includes the following:

1. The plan should fit into, and be a major component of, the twenty-year roadmap for the field described in recommendation two of the HEPAP Subpanel report. Another important planning document is the recent HEPAP submission to the Office of Science for the facilities plan.
2. The initial assets that will make it possible to build a strong future with available resources are the existing facilities at Fermilab, the strengths of the existing Fermilab staff, and the active participation of a strong Fermilab user community.

I would like the Committee to give an interim progress report in time to discuss the important issues at the Aspen meeting of the Fermilab Physics Advisory Committee. We will develop a schedule for the committee to write a final report after the initial meetings to organize the work.

Last update 06/10/03 [Mary Cullen](#)

[Security, Privacy, Legal](#)

 Fermi National Accelerator Laboratory