The HEPAP Planning Process

Fred Gilman
DPF Town Meeting
August 9, 2000
The Need for Further Planning

• Need to continue to provide a clear, well-formulated vision of the present and future of HEP to the Executive branch, Congress, and the general public

• Much has happened since the 1998 Subpanel
  - Completion and commissioning of the Main Injector, PEP II, CESR upgrade
  - Significant R&D on future facilities at the energy frontier, as recommended by the Subpanel
  - Important physics discoveries
  - Two fiscal years below constant-level-of-effort budget for DOE HEP program
The White Paper

• HEPAP was asked at the March 2000 meeting at Fermilab to provide intermediate term guidance, based on the 1998 Subpanel’s report, in the form of a White Paper

• Charge letter was received in June, placing the White Paper in a significantly larger planning context that includes a new HEPAP subpanel

• Stimulated by the need for a document in time (this Fall) for the FY2002 budget process that succinctly states the status and direction of the U.S. program in relation to the major scientific issues of HEP
The White Paper (continued)

- NSF is now a partner with the DOE in the process
  - Support at high levels in both the DOE and NSF for HEPAP to report to both agencies
  - Joint support was very important to obtaining U.S. participation in the LHC, I believe it is critical to support of HEP in the longer run

- The White Paper is but one step in a comprehensive planning process that would involve broad input from the community; the White Paper process and then Snowmass 2001 will be part of the input to a HEPAP subpanel to be formed in early 2001
Aims of the White Paper

Update the 1998 HEPAP Subpanel Report and “(1) examine the issues of the discovery potential and optimum utilization of the facilities that have now been completed and upon which the Subpanel placed its highest priority; (2) identify the major scientific issues confronting high-energy physics worldwide, and outline a timeline for R&D, design and possible decision points on the future frontier facilities that will be capable of addressing those scientific issues; and (3) indicate the appropriate next steps for each of these facilities.”
I have asked a subset of the people who were on the last HEPAP Subpanel to join me as a “Writing Group” to produce a draft of the White Paper.

Sekhar Chivukula, Gerry Dugan, Paul Grannis, Steve Holmes, Ewan Paterson, Abe Seiden, and Marjorie Shapiro
Input from the Community

• Special sessions were held at the Fermilab Users Meeting on June 27th and the SLAC Users Meeting on July 7th. Today the issues are being discussed here at the DPF Town Meeting.

• Please write to me by letter (at the Department of Physics, Carnegie Mellon University, Pittsburgh, PA 15213) or by email (gilman@cmuhep2.phys.cmu.edu) on the issues facing us.
Update on Drafting the White Paper

• Truly excellent talks were presented to the Users’ meetings and to the Writing Group that update the physics questions facing us, how we might address them, and the status of R&D on future facilities

• Important written and verbal input from the community

• The Writing Group met at UCLA in July, is meeting here in Columbus, and will meet again in September to produce a draft of the White Paper
Some Early Observations

• The Main Injector, PEP II, and CESR upgrades have been completed on time and on budget. The physics case for operating these facilities at a level to maximize their output is stronger than ever.

• Many other Subpanel recommendations and priorities were implemented.

• A muon storage ring/neutrino source has become the focus of most of those working toward an eventual muon collider.

• A world picture and timeline for decisions on various future frontier facilities, spaced out over the next two decades is beginning to fall into place.
Town Meeting Program

• Brief talks by Mike Turner on the NRC Committee he chairs, and then by Mike Witherell, Maury Tigner, and Jonathan Dorfan on their personal perspectives on the future of the field

• Open discussion