

April 20, 2005

Dr. Jaehoon Yu  
Dept. of Physics & Astronomy  
University of Texas  
Arlington TX 76019

Dr. Jean-Claude Brient  
LLR  
École Polytechnique  
F91128 Palaiseau CEDEX  
France

Dear Jae and Jean-Claude,

Thank you for the presentation by Jae to the Physics Advisory Committee, and your preparation of the Technical Memorandum on your Test Beam Plan (Fermilab-TM-2291). As you are aware, Fermilab considers the International Linear Collider a critical part of our long-range future, and we are committed to advancing the R&D on ILC detectors. Organizing the detector R&D effort in the face of very tight funding constraints is a serious challenge. The Committee was aware of all this when, following your presentation and discussion, they made the following comments to me.

*"Detector development for the International Linear Collider will require test beams both to probe and optimize characteristics of particular detector designs and to advance the associated simulation tools. The Committee heard a presentation summarizing long-range R&D goals and specific plans for electromagnetic and hadronic calorimeter development. These plans call for extensive use of test beams. Fermilab is a natural site to host such efforts, and the existing test beam facilities can already satisfy many of the stated goals. Upgrades of the test beam facilities may in some cases be required, however, and requests for particular alterations to spill structure, beam energy and content, and test facility space formed part of the presentation. The Committee notes that very low energy beams are important for calorimeter development, but difficult for the Laboratory to deliver with the existing beamlines.*

*The Committee strongly encourages Fermilab to make facilities available for ILC detector tests. Proposals for beamtime, particularly those that require upgrades to Laboratory facilities, will need to be considered in the broad context of the ILC program. Coordination and advice from the emerging ILC organization will be necessary to prioritize and manage multiple components of the development program, adjudicate among diverse interests of primary researchers, and ensure efficient use of resources. The Laboratory should interact closely with ILC management to optimize the use of its facilities and plan possible upgrade paths."*

As you see, the Committee has recognized the important role that Fermilab test beams should play in R&D for the ILC detectors. We agree with this and encourage you to proceed with your discussions with Fermilab's test beam management to prepare a Memorandum of Understanding (MOU) to implement the tests already possible with the existing prototypes and facility. This step can be achieved rather expeditiously. We would also like to see a plan developed that would provide everything needed to carry out the full test program. This plan should define the scope, impact, and schedule, as it would for a new experimental project, and should identify the resources required. We would then be in a position to see how to carry out the plan. I ask you to work closely with the staff of the Laboratory to develop this plan.

Again, thank you for your interest in the Fermilab test beams and for your presentations. We look forward to working with you on starting up the major test beam effort for the ILC detectors.

Sincerely,



Michael Witherell

cc:

B. Barish  
H. Weerts  
E. Fisk  
S. Tkaczyk  
P. Oddone  
K. Stanfield  
H. Montgomery  
S. Holmes  
J. Appel  
J. Strait  
R. Dixon  
V. White  
R. Kephart  
J. Alexander  
M. Procario  
J. Whitmore  
F. Bernthal