Fermi National Accelerator Laboratory
Victoria A. White * Head, Computing Division
MS370 * P.O. Box 500 * Batavia, IL 60510
Office 630/840-3936 * Fax: 630 840 3785
Email white@fnal.gov Cell: 630 774 9552

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Prof. M. Tigner
Director, Laboratory for Elementary-Particle Physics,
Cornell University,
Ithaca, NY 14853-5001

Dear Prof. Tigner,

I am writing to strongly support your proposal to convert CESR to a research facility suitable for ILC Damping Ring (DR) beam studies and experiments. The experimental program planned for this facility will provide crucial information on a number of very important topics in the ILC DR design, especially electron cloud effects.

We are very interested in working with you to model your proposed experiments with our beam dynamics codes in order to study emittance dilution effects. Our Computational Physics for Accelerators group, has developed, through the DOE SciDAC program, a parallel suite of simulation tools which include detailed models for effects such as electron cloud and Intra Beam Scattering (IBS), and which has higher order magnetic optics capabilities. Applying our multi-physics modeling capabilities to CESR ILC DR experiments will help determine the dominant mechanisms for emittance dilution under conditions similar to those expected for the ILC DR operation. These results could be crucial in shaping the final ILC DR design.

Panagiotis Spentzouris and his group are working, together with people from several labs and universities, to provide the type of computational tools and infrastructure that can support a number of accelerator modeling efforts. Working closely with experimental facilities is an important factor in the success and acceptance of this work and has, in the past, proved to be of great mutual benefit.

We are excited about the possibility of working with you on this project, in the context of our participation in the GDE Damping Ring design work.

Sincerely,

Victoria White
Head, Computing Division