



Fermilab

November 8, 2000

Rajendran Raja
MS 122

Dear Raja,

Thank you for the presentations and discussions on P-907 at the recent Physics Advisory Committee (PAC) meeting. The PAC recommended that P-907 be deferred, and I have accepted that recommendation. The Committee's comments follow.

The Committee heard several presentations and reviewed supporting documentation for P-907: "Proposal to Measure Particle Production in the Meson Area Using Main Injector Primary and Secondary Beams." This program has four principal objectives:

- 1) to measure particle production on NuMI targets;*
- 2) to collect a large sample of hadron-nucleus interactions as archival data on particle production;*
- 3) to explore phenomena in proton-nucleus scattering that are relevant to the interpretation of heavy ion data; and*
- 4) to test scaling laws in high-energy particle production.*

The characterization of particle production for NuMI will likely be valuable for the detailed interpretation of MINOS data. The Committee heard with interest about the potential impact on the RHIC program.

Stage I approval for P-907 is not recommended at this time. The Committee encourages the P-907 collaboration to prepare an enhanced proposal for consideration in 2001. Several important issues need to be addressed, including the provision of external support for all detector costs. The Committee anticipates considering the revised proposal at the November 2001 meeting. It is important to note, however, that the Laboratory will proceed with preparation of the necessary beamline in the SY 120 project.

The critical issues are as follows:

- *The collaboration needs to be strengthened, and a detailed plan for management and technical coordination must be presented.*
- *Funding from sources outside Fermilab, for example from the nuclear physics/heavy ion community, needs to be developed for non-beamline project costs.*
- *A higher level of coordination with MINOS, and a clear statement of what is needed and what can be contributed on the time scale of running in ~2003 need to be demonstrated.*
- *A detailed schedule for installing and commissioning the detector and specific running scenarios must be developed.*
- *The nuclear/heavy ion physics case needs to be developed in writing, and should be supported by a strong endorsement from the nuclear physics/heavy ion community.*

The Committee requests that the Fermilab Directorate provide assistance and advice to the collaboration in addressing these issues.

You should meet with Mike Shaevitz in the near future to discuss these issues and how to proceed in preparing a revised proposal.

Sincerely,

Michael Witherell

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