Director's Office

Building 510F
P.O. Box 11973-5000
Phone 516 344-5414
Fax 516 344-5820
tkirk@bnl.gov

October 1, 1999

Professor Kirk T. McDonald
Department of Physics
Princeton University
P.O. Box 708
Princeton, NJ 08544

Dear Kirk:

I am happy to inform you that the Muon Collider Oversight Group (MCOG) has met to consider the written report of the Muon Technical Advisory Committee (MUTAC). In the MUTAC report the following recommendation was made regarding your experiment, AGS E951, "An R&D Program for Targetry and Capture at a Muon Collider Source":

> *"We agree that the targeting experiment could go forward more or less as proposed subject to the suggestions made below." [MUTAC report dated August 27, 1999]*

MCOG has accepted this recommendation and will endorse the carrying out of E951 at Brookhaven's AGS as part of the national muon collider R&D program. On behalf of Brookhaven National Laboratory and by this letter, I offer my congratulations and extend to you BNL approval for the construction and running of E951 at the AGS as part of the national muon collider R&D program.

Because the purpose and goals of your experiment are embedded in the larger context of the national muon collider R&D effort, and the results will also be pertinent to the development of any future muon storage ring source for neutrino physics, the approval by BNL to run your experiment is subject to funding and scheduling constraints that will flow out of this larger R&D program. I am sure you are well aware of this circumstance. In particular, the approval of E951, recommended by MUTAC and endorsed by MCOG, was provided in the context of a more general MUTAC report, dated August 27, 1999. The entire MUTAC report has been considered by the MCOG, who have offered their advice on its contents through their Laboratory directors to the Muon Collider Collaboration (MCC) and to the sponsoring agencies, currently anticipated to be both the US Department of Energy (DOE) and the National Science Foundation (NSF).

Accordingly, you should obtain from the MCC spokesperson, a copy of the MCOG letter of transmittal and the MUTAC report as a way of understanding the priority context in which E951 is expected to evolve. You are also asked to draft and negotiate with BNL's Collider Accelerator Department (CAD), a detailed Memorandum of Understanding (MOU) that will govern: the schedule for construction and operation of E951; commitments of the proposing

scientists to the experiment; costs of the experiment; funding and resource availability; and other pertinent aspects of E951 such as the BNL safety and environmental requirements.

In the case of E951, an experiment that evolves through a number of discrete phases, it may be practical to envision a sequence of MOUs which are executed in step with the phases of the experiment. I am open to this kind of approach if it lessens the bureaucratic burden on your group. Dr. Phil Pile, Associate Chair of the CAD, can provide guidance to you on this topic and he will be the principal BNL officer responsible for the negotiation of your E951 MOU(s).

I now turn to the topic of scheduling and funding. Here, as you no doubt know, BNL must proceed to DOE for approval and funding on a project by project basis since BNL no longer has a base program for particle physics experiments at the AGS. We are hopeful that the national priority of the muon collider R&D program is sufficiently high, and that the priority of E951 within this program is sufficiently clear with the guidance of MUTAC and MCOG, that we will be able to move briskly ahead on the construction and running of this experiment. Indeed, as you know, CAD has already planned space on the AGS experimental floor for E951 and has begun to clear this space in anticipation of the approval of your experiment.

So, following all the necessary bureacratic conditions we are forced to impose, I want to close by offering you and your colleagues in E951, my sincere congratulations on a well-targeted proposal and my best wishes for a timely and successful execution of this very important experiment. If all goes well, we may be able to look back some day with satisfaction and realize that both a muon storage ring based neutrino program and later, an energy frontier muon collider facility, were born and enabled through the results of this first targeted muon collider R&D experiment.

Best wishes to the E951 collaboration for full success with this experiment!

Sincerely,

Thomas B.W. Kirk
Associate Laboratory Director
High Energy and Nuclear Physics

cc: R. Palmer, MCC Spokesperson
S. Holmes, MCOG
P. Oddone, MCOG
M. Tigner, MUTAC Chairman
BNL HENP PAC Members
J. R. O'Fallon, DOE HEP Division
D. Sutter, DOE HEP Division
J. Ritchie, DOE HEP Division
P.K. Williams, DOE HEP Division
M. Goldberg, NSF Physics Division
A. Firestone, NSF Physics Division