

**Subject:** RE: FY13 Muon upgrade R&D funding  
**From:** Steve Ahlen <ahlen@bu.edu>  
**Date:** 10/20/12 4:38 PM  
**To:** <Venetios.Polychronakos@cern.ch>  
**CC:** "John M. Butler" <jmbutler@bu.edu>

Hi Vinnie:

Here are the details for the BU R&D request for FY13. Let me know if you need anything else.

Work to be done:

We will use our existing facilities in the Physics Department at Boston University (including 550 square foot class 5,000-10,000 cleanroom, 1.5m by 3m optical table, mechanical jiggging, vacuum systems, optical/mechanical metrology equipment and chamber gas/electronics equipment) to evaluate construction procedures for Micromegas chambers. We will develop specifications regarding room cleanliness, humidity, temperature stability, table damping and flatness, and gas system components (e.g. glue, o-rings, and other wetted materials). We will do simple operations tests of Micromegas prototypes, with an emphasis on mechanical tolerance, spark rates and dark current. We have a Cf-252 neutron source for low dose rate background studies. We have a mesh stretching machine (that was used for neutron detector R&D) that can be used for making prototype Micromegas detectors with removable meshes. We have two large glove boxes that can be used for environmental studies. And we have two large general purpose laboratories (about 1000 square feet each) in addition to the cleanroom.

Personnel:

The work will be carried out by Prof. Steve Ahlen (100% of research time), Dr. Andrew Inglis (50% of time) and one undergraduate student.

Requested funds:

We request \$50k (which includes fringe and overhead) for part time support of Dr. Andrew Inglis as an Engineering Physicist. Dr. Inglis is experienced in the design and construction of particle detectors, being a Co-Inventor of a direction sensitive detector for fast neutrons, and of a lithium foil detector for thermal neutrons.

Steve

-----Original Message-----

From: Ven Polychronakos [<mailto:Venetios.Polychronakos@cern.ch>]  
Sent: Friday, October 19, 2012 5:31 PM  
To: kj; Jim Bensinger; Liss, Tony M; Steve Ahlen; Bing Zhou; John Huth; Melissa Franklin  
Cc: Frank Taylor; Abe Seiden  
Subject: FY13 Muon upgrade R&D funding

Dear All,

It seems that, at long last, our management is about to consider the FY13 upgrade R&D budget. As you might know the "budget targets" for

FY13 were established long ago. They only include U.Az. and BNL since these were the only institutes involved in th past several years (Brandeis has also been interested in the upgrade from day 1 but their needs come a bit later). After the submission of our letter of intend following the Brandeis meeting I contacted you and requested \$\$ for the new groups at the amounts you asked for. In addition I added 50k for Harvard although, at the time, I didn't have a specific request but knew of their interest both in electronics and chamber technology.

On November 6 our management will "scrub" the budget requests and decide how to allocate the limited (you guessed that, I'm sure) funds.

For this exercise I will need:

1. A brief statement of what you will do in FY13 2. A breakdown of the requested \$\$ in Manpower (FTE, names(s) of person(s) involved, cost, and COLA if applicable ), M&S, and Travel.

I have the information for U.Az and BNL and just need it for the following:

1. U. Michigan 130k
2. BU 50k
3. U. Ill 50k
4. Harvard 50k.

Please try to get this information to me in the next few days and no later than Tuesday October 23.

Thanks and hope for the best,  
--Vinnie

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V. Polychronakos          Tel. (631)344-3982
Physics, 510A             FAX (631)344-5568
Brookhaven National Lab  Home(France)+33 4 50 20 86 99
Upton, NY 11973          CERN +41 22 7672776, +41 76 487-3121(Cell)
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