

# Cover Letter

May 16, 2017

**To: Jim Napolitano, PAC chair**

Dear Jim,

We are submitting an update to the proposal PR12-16-001 "Dark matter search in a Beam-Dump eXperiment (BDX) at Jefferson Lab," which was submitted to PAC44 in 2016. The proposal received a conditional C2 approval at that time. The report details our efforts to address the issues you raised and feedback you provided. Our work has proceeded on two fronts: working with the JLab Radiation Control group to implement the FLUKA program to simulate the experiment (mostly complete) and a plan to measure muon fluxes from the dump in the existing Hall A experimental configuration. We appreciate that lifting of the conditional approval will at the very least require completion of the planned test measurements. The test plan has been worked out in coordination with the JLab management, and will require some lab resources, though modest, to install two pipes in the ground behind Hall A. Therefore, we submit this update with the request that you give us feedback at this intermediate stage to validate our plan to move forward toward full approval.

Sincerely,  
BDX spokespersons  
(M. Battaglieri, A. Celentano, M. De Napoli, R. De Vita, E. Izaguirre, G. Krnjaic, E. Smith)