

Abstract Submitted  
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**Results from the HPS Commissioning Run** NATHAN BALTZELL,  
Thomas Jefferson National Accelerator Facility, HPS COLLABORATION — The  
overwhelming evidence for the existence of dark matter is yet to be confirmed by  
direct detection. A dark photon could resolve existing puzzles in particle physics  
and provide a coupling with ordinary matter, but the parameter space of MeV-  
GeV masses and small couplings remains largely unexplored by experiments. The  
Heavy Photon Search in Hall-B at Jefferson Lab was designed to search for such  
a photon, radiated by few-GeV electrons, via its mass and vertex signatures in its  
decay to  $e^+e^-$ . The detector consists of a compact silicon tracker in a dipole field for  
momentum and vertex resolution, combined with a calorimeter for triggering and  
energy measurements. At the end of 2014, we commissioned the calorimeter, data  
acquisition, and triggering systems at the design luminosity. Preliminary results on  
expected and measured inclusive electron rates, as well as reconstruction of  $e^+e^-$   
invariant mass, will be presented.

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