

Abstract Submitted
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Heavy Photon Search Run and Results Update HOLLY SZUMILA-VANCE, Old Dominion University, HEAVY PHOTON SEARCH COLLABORATION — The Heavy Photon Search (HPS) experiment at Jefferson Lab is searching for a hypothetical massive particle called the heavy photon which could mediate a dark electromagnetic-type force. If heavy photons kinetically mix with Standard Model photons, they may be radiated by electrons scattering from a heavy nucleus and then decay to $e^+ e^-$ pairs. HPS is uniquely suited to search for heavy photons that either decay at the target or a measurable distance after. The experiment utilizes a silicon vertex tracker for momentum and vertex reconstruction, together with an electromagnetic calorimeter for measuring particle energies and triggering events. The HPS experiment took its first data during the spring of 2015 using a 1 GeV electron beam incident on a tungsten target and completed a second run in the spring of 2016 at a beam energy of 2.3 GeV. This talk will describe detector and run details, along with preliminary results if they are available.

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