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### **Searching for dark photons at Jefferson Lab**

HOLLY SZUMILA-VANCE, Jefferson Lab

Dark photons are a proposed new vector force carrier which could interact with the Standard Model via kinetic mixing and decay visibly to lepton pairs or invisibly. The search parameter space for such a particle is described by its mass and coupling strength to the Standard Model. Visible searches look for a bump of excess events in the invariant mass spectrum of reconstructed lepton pairs whereas invisible searches look for evidence of a dark photon in the reconstructed missing mass spectrum. Dark photons could be the leading interaction between the Standard Model and the hidden sector. Jefferson Lab is an ideal search facility for dark photons due to its high intensity electron beam. This talk covers the current status of the ongoing experimental program at Jefferson Lab to search for signatures of dark photons. The following experiments will be discussed: the A Prime Experiment (APEX) in Hall A, the Heavy Photon Search (HPS) in Hall B, the DarkLight Experiment in the Low Energy Recirculator Facility and the proposed Beam Dump Experiment (BDX). Both APEX and HPS have taken data previously and have approved future running. The status and running of DarkLight and the experimental reach of the BDX experiment will be discussed. These experiments contribute to a comprehensive search for evidence of dark photons with masses up to 1 GeV in both the visible and invisible decay hypotheses with a range of couplings to the Standard Model that allow for searches with both short and long-lived dark photons. This talk summarizes the physics and impact of Jefferson Lab experiments.