Abstract Submitted
for the DNP20 Meeting of
The American Physical Society

Analysis of the APEX Experiment Data SEAN JEFFAS, University of Virginia, DAVID HAMILTON, University of Glasgow, MARK JONES, Thomas Jefferson National Accelerator Facility, VARDAN KHACHATRYAN, Cornell University, NILANGA LIYANAGE, University of Virginia, JOHN WILLIAMSOM, University of Glasgow, BOGDAN WOJTSEKHOWSKI, Thomas Jefferson National Accelerator Facility — The A-Prime Experiment (APEX) took data for the search for dark matter force mediator A in the mass range 160-230 MeV decaying to e+e- pairs with statistics corresponding to the signal sensitivity on the level of coupling constant 10^{-9}. This experiment was carried out in Jefferson Lab experimental hall A in 2019 using the High Resolution Spectrometer (HRS) pair. We will present the results on the magnetic optics for accurate reconstruction of the particle momenta for the APEX configuration of the HRS spectrometers with the septum magnet. Preliminary results show that angular reconstruction could be accomplished with a precision of 0.5 msr or better.

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Date submitted: 26 Jun 2020 Electronic form version 1.4