

Abstract Submitted
for the CAL11 Meeting of
The American Physical Society

Current and Upcoming Sensitivities to Dark Matter in Gamma-Ray Observatories J. PATRICK HARDING, UC-Irvine, University of Maryland, KEVORK ABAZAJIAN, UC-Irvine — Dark matter particle candidates naturally emerge at the weak scale in extensions to the Standard Model of particle physics. Our analysis finds that current constraints from the all-sky exposure of the Fermi Telescope exclude the canonical expected cross section for weakly-interacting massive particle dark matter, in agreement with complementary results from other groups. At higher photon energies, corresponding to higher dark matter particle masses, I show that the High Energy Spectroscopic System (HESS) observatory and High-Altitude Water Cerenkov (HAWC) observatory provide unprecedented sensitivities to extended models of dark matter at the TeV and higher mass scales.

J. Patrick Harding
UC-Irvine, University of Maryland

Date submitted: 30 Sep 2011

Electronic form version 1.4