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Collider Searches for Effective WIMP Dark Matter¹ ANTHONY GRIPPO, Florida Gulf Coast Univ, JEFFREY HUTCHINSON, Florida Gulf Coast University, KARA FARNSWORTH, Institute of Physics, Czech Academy of Sciences — We analyze the kinematic distributions of Effective WIMP dark matter and estimate the statistical significance (S/\sqrt{B}) of dark matter signals at the LHC and future colliders. These Effective WIMP models contain a singlet dark matter particle and a lepton “partners” with renormalizable cubic couplings between dark matter, the lepton partners, and leptons. Within this framework, we consider four models where the dark matter is a real scalar boson, complex scalar boson, Majorana fermion, or Dirac fermion.

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