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Dark matter candidate with well-defined mass and couplings ROLAND ALLEN, Texas A&M University — There is as yet no confirmed and statistically significant evidence for direct, indirect, or collider-based detection of dark matter. However, several indirect searches, including AMS-02, Fermi-LAT, and PAMELA, have shown an intriguing excess of positrons when compared to expectations. Here we predict a Higgs-related but spin 1/2 dark matter candidate with a mass of 125 GeV. Since an initially reported 130 GeV gamma-ray excess has been abandoned by the full Fermi-LAT collaboration, this is a genuine prediction rather than postdiction. It would be consistent with a prediction of 125 GeV freshly-created positrons and antiprotons, but the complicated propagation of charged particles makes a comparison problematical.

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