

Abstract Submitted  
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**A multicomponent dark matter scenario with two stable WIMPs which is consistent with the Planck observations** ROLAND ALLEN, REAGAN THORNBERRY, ALEJANDRO ARROYO, CADEN LAFONTAINE, DYLAN BLEND, GABRIEL FROHAUG, Texas A&M University — We review a dark matter scenario which is ideal in the sense that (1) all of the well-known successes of supersymmetry are preserved, (2) the parameters can satisfy naturalness, (3) the addition of an extended Higgs sector implies a doubly rich plethora of new particles and new physics to be discovered in the near or foreseeable future, (4) the mass of the dominant dark matter WIMP is  $\leq 125 \text{ GeV}/c^2$ , (5) the gauge couplings of this particle are precisely defined, and (6) naturalness implies that its Higgs-mediated couplings are also comparable to those of a natural neutralino. This scenario, with two stable spin 1/2 WIMPs (a high-mass neutralino and a more abundant "Higgsion" with a mass of  $\leq 125 \text{ GeV}/c^2$ ), is consistent with the results of Planck and other experiments, and it also suggests that detection should be near in a variety of experiments for direct, indirect, and collider detection.

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