

A Heavy Weak Fermion Proposal for a Dark Matter Candidate

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Considering 4G model of final unification, this paper is a brief note based upon a recent paper by Seshavatharam et al. which proposes the existence of positively and negatively-charged heavy weak fermions of rest energy 585 GeV. The basic idea of this paper is that, in the context of galactic dark matter observations and study, in an analogy to the relationship between the proton and neutron, a weakly interacting massive neutral fermion of approximately 585 GeV could also exist and be considered as a massive dark matter candidate. Furthermore, a 1.17 TeV neutral parent compound boson of the oppositely-charged weak fermions could also exist and be considered as a massive dark matter candidate. If so, such high energy particles might only be detectable as emissions from the vicinity of black hole accretion disks and within the spectrum of gamma ray bursts.