

Direct Detection of Vector Dark Matter

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Abstract content

We complete formulae for the elastic cross section of general vector dark matter with nucleon in the direct detection at the leading order of the strong coupling constant, assuming that the dark matter is composed of vector particles. As an application of our formulae, the direct detection of the first Kaluza-Klein photon in the minimal universal extra dimension model is discussed. It is found that the cross section is larger than those in the previous works by up to a factor of ten.

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