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Prediction of excess neutrinos detected by IceCube as dark matter decay products. LUZ HERNNDEZ GALVN, Benemerita Universidad Autonoma de Puebla — In 2013, IceCube’s collaboration reported an excess of 28 high-energy neutrinos, which is well above the number predicted by the standard model considering background events. It has been suggested that such excess can be explained as a product of the decay of massive and unstable dark matter particles, with a lifespan large enough that decay products are not observable, which may be part of the halos of the galaxy and/or the extragalactic background, in this work we study that possibility. It explores the possible production of these neutrinos in an energy range of 10-100TeV considering a dark matter candidate with mass 1,10,100TeV and an average lifespan of 10²⁷s.

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