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Can future colliders be the light to see dark matter?

Despite different astrophysical measurements indicate the existence of dark matter, no evidence for its nongravitational interactions with standard model particles is yet available. If these interactions are present, dark matter could be produced at colliders, and many searches are performed in this direction at LHC. A very interesting opportunity to further shed light on the dark matter mystery is provided by future high-energy hadron and lepton colliders.

In fact, as I will mention in this remark, scenarios where the dark matter particle is the lightest member of an electroweak multiplet can be investigated in the multi-TeV regime at muon colliders as well as through precision measurements at electron and hadron colliders.

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