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Electrowek phase transition in a model for dark matter and muon g-2 anomaly

Friday, 11 October 2019 10:00 (30 minutes)

Phenomenological consequences of the strong first-order electroweak phase transition are discussed in an extension of the standard model with an inert doublet and vector-like leptons motivated by dark matter and the muon g–2 anomaly. We point out that a condition for the strong first-order electroweak phase transition inevitably induces a large logarithmic enhancement in Z boson decays, which relegates the explanation of the anomalous muon g-2 at below 2 sigma level. Future tests of the scenario are also discussed.

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