

# Electroweak 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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