

Cosmological phase transitions in a dimensionally-reduced vector dark matter model

Faced with the lack of observational evidence supporting the existence of new physics at the electroweak scale, alongside overwhelming experimental evidence that hints at the need for the exploration of new phenomena, such as neutrino masses/mixing or dark matter, new approaches to beyond the Standard Model (SM) phenomenology become imperative. Gravitational waves stemming from first-order phase transitions serve as an unparalleled gateway to new physics, offering insights beyond the scope of the Standard Model (SM). In this talk, we explore potential gravitational signatures originating from a non-abelian vector dark matter framework, where interactions with the visible sector are mediated via a dark vector-like fermion and examine its impact on the phase transition, contrasting it with a scenario involving a pure scalar-vector theory.

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yes

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