

Continuum Dark Matter

jeudi 2 juin 2022 17:10 (20 minutes)

In this talk, I will present a new theory of DM, qualitatively different from any existing proposal. I will present a theory, in which DM is made up of a novel form of matter, called “gapped continuum”. While ordinary elementary particles have unique masses - for example, each proton in the universe weighs exactly the same - the mass of DM states in our theory is a continuous parameter. I will present a fully realistic model that describes this DM candidate and its interactions with

ordinary particles. The continuum DM can give striking new experimental signatures in colliders, direct detection experiments, and cosmic microwave background measurements, while the strong suppression of direct detection signals reopens the possibility of a Z-mediated dark sector again.

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Classification de Session: Parallel Session 1