



ID de Contribution: 1

Type: Non spécifié

Rekindling s-Wave Dark Matter Annihilation Below 10 GeV with Breit-Wigner Effects

lundi 19 mai 2025 16:45 (30 minutes)

Thermal Dark Matter (DM) below the GeV scale faces strong cosmological and astrophysical constraints, with Cosmic Microwave Background (CMB) observations excluding s-wave annihilation cross-sections for thermal DM below 10 GeV. Such limits can be evaded with velocity dependent cross-sections, for example when DM annihilates near a narrow resonance. In this work, we explore the impact of resonance effects on DM relic formation using a model-independent approach. We then derive constraints on s-wave annihilation models from CMB data and indirect detection observations, highlighting the viability and limitations of resonant production.

Author: JOMAIN, Margaux (LAPTh)

Orateur: JOMAIN, Margaux (LAPTh)

Classification de Session: Dark universe

Classification de thématique: Dark Universe