



Contribution ID: 286

Type: **not specified**

Roads for Right-handed Neutrino Dark Matter: Relentless, Standard Freeze-out, and Early Matter Domination

Tuesday, 24 August 2021 22:30 (20 minutes)

Right-handed neutrinos appear in several extensions beyond the Standard Model, specially in connection to neutrino masses. Weak scale right-handed neutrino dark matter constructions are typically rather constrained by data. In this work, we carry out the dark matter phenomenology of a weak scale right-handed neutrino dark matter, within a type I seesaw model, in the presence of a fast early expansion of the universe (relentless production), and early matter-domination before or during dark matter freeze-out. We compute the dark matter relic density, the non-conventional direct detection rate featuring a spin-independent but velocity suppressed operator, and the existing collider bounds.

Primary authors: ARCADI, Giorgio; NETO, Jacinto Paulo (Federal University of Rio Grande do Norte); QUEIROZ, Farinaldo (International Institute of Physics -Natal); SIQUEIRA, Clarissa (Instituto de Física de São Carlos - Universidade de São Paulo (IFSC/USP)))

Presenter: NETO, Jacinto Paulo (Federal University of Rio Grande do Norte)

Session Classification: Dark Matter and Astroparticle Physics

Track Classification: Dark Matter and Astroparticle Physics