Contribution ID: **59** Type: **not specified**

Gravitational Waves from Gravitational Particle Production

Monday, September 22, 2025 3:00 PM (30 minutes)

The excitation of scalar dark matter during inflation may result in large isocurvature perturbations, which can be avoided by inducing a sizable effective dark matter mass during the inflationary phase. This can be achieved by a direct coupling to the inflaton, through a nonminimal coupling to the curvature, or by a large bare mass. Notably, when the isocurvature is suppressed at CMB scales, a peak arises at small scales, corresponding to modes that leave the horizon near the end of inflation. I will discuss how these large perturbations result in a stochastic gravitational wave background in the sensitivity range of existing and future gravitational wave observatories.

Primary author: GARCIA GARCIA, Marcos A. (Instituto de Física, UNAM)

Presenter: GARCIA GARCIA, Marcos A. (Instituto de Física, UNAM)

Session Classification: Plenary 3

Track Classification: Plenary