

Towards improved overclosure bounds for WIMP-like dark matter models

Tuesday, 26 June 2018 15:00 (30)

Tight constraints from the LHC and from direct and indirect detection experiments have put many simple dark matter models under tension in recent years. Besides putting forward new ideas in model building, it can be useful to develop more accurate computations on which a given dark matter scenario is based. In particular, we focus on the calculation of the dark matter relic density via thermal freeze-out and investigate the impact of the thermal medium: modified Sommerfeld effect, Salpeter correction decohering scatterings, formation and dissociation of bound states. We apply this formalism to the Inert Doublet Model and to a Majorana fermion dark matter co-annihilating with a strongly interacting scalar.

Primary author(s) : Prof. LAINE, Mikko (Albert Einstein Center, Institute for Theoretical Physics); Dr BIONDINI, Simone (Albert Einstein Center, Institute for Theoretical Physics)

Presenter(s) : Dr BIONDINI, Simone (Albert Einstein Center, Institute for Theoretical Physics)

Session Classification : Parallel