



Contribution ID: 10

Type: **not specified**

Heavy light inflaton and dark matter production

I will discuss a minimal extension of the Standard Model by a scalar with quartic interaction serving as an inflaton. For the model where scale symmetry is broken only in the inflaton sector, the mass of the inflaton is constrained to be relatively low. Analysis of inflaton masses $m_\chi \lesssim 250$ GeV provides a window with viable inflationary properties that evade direct observational constraints due to the small inflaton mixing with the Higgs sector. The addition of heavy neutral leptons with Majorana masses induced by the interaction with the inflaton allow for cold dark matter in the model with masses $O(1-10)$ MeV.

Presenter: KEATS, Abigail (University of Manchester)

Session Classification: Student Session