



Contribution ID: 16

Type: **Parallel talk**

SMASH, a simple extension of the SM to address dark matter, inflation, baryogenesis, the strong CP-problem and neutrino masses

Tuesday, 20 June 2017 15:00 (15 minutes)

I will present a simple extension of the Standard Model which adds a new scale at 10^{11} GeV, solving the strong CP problem with an axion and the smallness of neutrino masses via a variant of the see-saw mechanism. This leads to a dark matter candidate (the axion), and explanation of the matter/anti-matter asymmetry of the Universe (through leptogenesis) and the identity of the inflaton. The axion mass is predicted to be between 50 and 200 micro eV and may be detected in the near future with axion-photon conversion experiments. The model gives specific predictions for the spectrum of primordial perturbations and the number of extra relativistic species, both of which may be tested at the required precision with future cosmological probes.

Presentation type

Parallel talk

Primary author: Dr BALLESTEROS , Guillermo (University Paris-Saclay)

Presenter: Dr BALLESTEROS , Guillermo (University Paris-Saclay)

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