

New mechanism of producing superheavy fields during inflation

I will discuss a new mechanism of producing superheavy fields (with the masses much larger than the inflationary Hubble rate) during inflation. The key ingredient of the mechanism is a linear coupling of the superheavy field to a function of the inflaton. During inflation this induces almost constant force dragging the corresponding field to the non-zero value. I will discuss implications of the mechanism proposed for Dark Matter and baryon asymmetry generation as well as its phenomenological consequences. The talk is based on [arxiv:1805.05904], [arxiv:1809.08108] and [arxiv:1812.03516].

Primary author: RAMAZANOV, Sabir (CEICO, Institute of Physics)

Presenter: RAMAZANOV, Sabir (CEICO, Institute of Physics)