Contribution ID: **17** Type: **not specified**

Gravitational wave background from vacuum and thermal fluctuations during axion-like inflation

Tuesday 10 September 2024 16:15 (15 minutes)

We revisit the framework of axion-like inflation, considering a warm inflation scenario in which the inflaton couples to the topological charge density of non-Abelian gauge bosons whose self-interactions result in a rapidly thermalizing heat bath. Including both dispersive (mass) and absorptive (friction) effects, we find that the system remains in a weak regime of warm inflation (thermal friction < Hubble rate) for phenomenologically viable parameters. We derive an interpolating formula for vacuum and thermal production of tensor perturbations in generic warm inflation scenarios, and find that the perturbations exhibit a model-independent f^3 frequency shape in the LISA window, with a coefficient that measures the maximal shear viscosity of the thermal epoch.

Authors: LAINE, Mikko Sakari (Universitaet Bern (CH)); KLOSE, Philipp (Universität Bielefeld); PROCACCI, Simona (University of Geneva (CH))

Presenter: KLOSE, Philipp (Universität Bielefeld)

Session Classification: Short Talks