

GWs from axion preheating and SGWB reconstruction at LISA

Friday, 26 June 2020 14:00 (1 hour)

Zoom meeting: <https://cern.zoom.us/j/7930190483> (password: see email)

Format: 40 minutes talk + 20 min discussion

Virtual Axion Institute: The discussion on this talk can be continued in Mauro's virtual guest office. <https://mattermost.web.cern.ch/axions/channels/mauro-pieroni>

Abstract: The talk is divided in two independent parts. I will first discuss models in which a pseudoscalar (axion) inflaton is non-minimally coupled with some (Abelian) gauge fields. In particular, I will show that the efficiency of gravitational wave production during preheating can be used to set stringent constraints on the axion/gauge field coupling. In the second part of the talk I will discuss model independent reconstruction of stochastic gravitational wave backgrounds (SGWB) at LISA. After a brief introduction of the topic, I will discuss a recently proposed approach based on principal components analysis.

Presenter: PIERONI, Mauro (Imperial College London)

Session Classification: Gravitational waves