

## Gravitational waves from oscillons after inflation

I will talk about the production of gravitational waves during preheating after inflation in the common case of field potentials that are asymmetric around the minimum. In particular, I will present a study of the impact of oscillons, comparatively long lived and spatially localized regions where a scalar field (e.g. the inflaton) oscillates with large amplitude. Oscillons in asymmetric potentials associated with a phase transition can generate a pronounced peak in the spectrum of gravitational waves, that largely exceeds the linear preheating spectrum. I will discuss the possible implications of this enhanced amplitude of gravitational waves. For instance, for low scale inflation models, the contribution from the oscillons can strongly enhance the observation prospects at current and future gravitational wave detectors.

**Authors:** M. CEFALÀ, Francesco (University of Basel); Prof. ANTUSCH, Stefan (University of Basel); Dr ORANI, Stefano (University of Basel)

**Orateur:** Dr ORANI, Stefano (University of Basel)