

## Traces of a Heavy Field in Gravitational Waves

*Wednesday 8 June 2022 14:00 (15 minutes)*

I will discuss gravitational waves (GWs) induced by a heavy spectator field that starts to oscillate during inflation. During the oscillation of the spectator field, its effective mass can also oscillate in some potentials. This mass oscillation can resonantly amplify the spectator field fluctuations. I will show that these amplified fluctuations can induce large GWs, which could be investigated by future gravitational wave observations. This kind of induced GWs can be produced even if the spectator field does not have any interaction with other fields except for gravitational interaction. This talk will be based on my paper, arXiv: 2203.04974.

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