

## Axion's mass from lattice QCD

*Wednesday 17 May 2017 13:30 (1h 30m)*

We determine the topological susceptibility and the thermodynamical equation of state for temperatures relevant for the axion production in the early Universe. We use lattice QCD with dynamical fermions. We point out several difficulties in these calculations and address them by introducing novel techniques. Assuming the standard QCD axion scenario and no topological defects we obtain a lower bound on the axion's mass. The talk summarizes the results of [doi:10.1038/nature20115](https://doi.org/10.1038/nature20115).

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