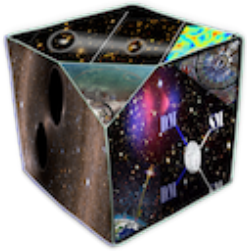

Contribution ID: **7** Type: **Poster on dark matter**

Numerical Simulation of the Axion Field through the QCD Phase Transition

We perform a large scale (3+1)-dimensional numerical simulation of the axion field around the QCD epoch. Our aim is to fully resolve dynamical non-linear effects in the inhomogeneous axion field, collapsing domain walls and oscillons. These effects are important as they lead to large overdensities in the energy density at late times. Those overdensities will eventually collapse into axion minicluster, which have various phenomenological implications like microlensing events. It is therefore important to have a reliable estimate of the number of overdensities and their mass relation.

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