

# Exchange-Correlation Effects in Axion Structure Formation

*Monday 18 June 2018 16:35 (5 minutes)*

The search for QCD axion dark matter is well underway. Many of these searches require detailed knowledge of the axion's cosmological distribution. However, our understanding of axion structure formation is far from complete, due largely to the candidate's highly-degenerate state. This talk presents a new model of axion structure formation that includes the quantum nature of condensed Bose fluids. Theory and preliminary simulations show notable deviations from mean field approaches.

## Summary

We are presenting a new model for relic QCD axion structure formation.

**Primary author:** Dr LENTZ, Erik (University of Goettingen)

**Presenter:** Dr LENTZ, Erik (University of Goettingen)

**Session Classification:** Plenary short presentations