## **Particle Physics Challenges**



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## Axion Minicluster Power Spectrum and Mass Function

Wednesday 26 September 2018 15:15 (15 minutes)

We present a semi-analytical method to calculate the average axion energy density as well as the power spectrum of density fluctuations when vacuum re-alignment happens after inflation. Furthermore, we develop a modified Press & Schechter approach, suitable to describe the collapse of non-linear density fluctuations during radiation domination. This allows us to make a prediction for the distribution of mass and size of axion miniclusters. The presentation is based on the work published under the arXiv number 1708.04466.

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