

## Phenomenology 2019 Symposium



Contribution ID: 661

Type: **parallel talk**

## Co-Interacting Dark Matter

*Tuesday 7 May 2019 14:45 (15 minutes)*

To solve the small scale issues in galaxies with dark matter, there are two major scenarios: self-interacting dark matter and fuzzy dark matter. The mass of the self-interacting dark matter is about GeV, and the mass of fuzzy dark matter need to be  $10^{-22}$  eV. We propose a novel mechanism that by scattering with subdominant WIMP, the ultralight field solves the small scale issues in galaxies. In the example that we are giving, the mass region of the ultralight field is very broad, from meV to  $10^{-21}$  eV.

### Summary

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**Session Classification:** DM III