The 12th International Workshop Dark Side of the Universe

Contribution ID: 114

Type: Invited talk

## The case for dark matter self interactions

Friday 29 July 2016 14:00 (30 minutes)

I will review motivations for the existence of self interacting dark matter and discuss possible astrophysical observables.

Self-interactions of dark matter particles can potentially lead to an observable separation between the dark matter halo

and the stars of a galaxy moving through a region of large dark matter density. Such a separation has recently been

observed in a galaxy falling into the core of the galaxy cluster Abell 3827.

I discuss the DM self-interaction cross section needed to reproduce the observed effects.

## Based on (arXiv number)

## Summary

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Track Classification: Alternatives to LambdaCDM Cosmology