

Evolution of Self-Interacting Dark Matter Halos

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Large self interactions between dark matter particles allow for efficient heat transfer within a dark matter halo, altering halo properties from LCDM predictions and thereby potentially alleviating small-scale structure formation puzzles. These properties can be explored using a semianalytic approach in which the halo is modeled as a gravothermal fluid. In this talk, I will describe the phases of halo evolution and discuss how the choice of the particle physics model for self interactions, as well as the environment of the halo, can impact evolution.

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