

Titulo: Self Interacting Dark Matter and CDM Small Scale Potential Problems
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Data: 22/11/2016

Horário: 11h00

Local: Auditório Meson Pi, DRCC

Abstract:

In this seminar I will briefly summarize the evidences for the existence of dark matter. Potential problems that Cold Dark Matter models might face at small scales will then be introduced. These problems might be alleviated if dark matter self interacts. If this is the case, its capture rate by astrophysical objects should be enhanced, and as a consequence their annihilation rate should increase. In this talk I will describe the determination of the neutrino flux from dark matter annihilation, taking self interactions into consideration. Its detection rate at the IceCube detector will also be described. This analysis probes dark matter self interacting models. By comparing this estimated rate with IceCube's experimental results, we constrain a significant fraction of these models.