

Galactic Center excess by two Higgs doublet portal scalar dark matter

Thursday, 29 October 2015 18:13 (17 minutes)

We consider a simple extension of the Higgs sector in a Higgs portal dark matter where a real scalar is a candidate for dark matter in the present Universe. This Higgs sector extension allows that its dark matter annihilation suitably explains the observed excess of the gamma-ray flux from the Galactic Center. We identify the parameter region of the model that can fit the gamma-ray excess and satisfy phenomenological constraints, such as the observed dark matter relic density and the null results of direct dark matter search experiments.

Primary author: SETO, Osamu (Hokkai-Gakuen University)

Co-author: Prof. OKADA, Nobuchika (University of Alabama)

Presenter: SETO, Osamu (Hokkai-Gakuen University)

Session Classification: Dark Matter

Track Classification: Dark matter: Physics and Cosmology