

STARS2013 - 2nd Caribbean Symposium on Cosmology, Gravitation, Nuclear  
and Astroparticle Physics / SMFNS2013 - 3rd International Symposium on  
Strong Electromagnetic Fields and Neutron Stars



Contribution ID: 29

Type: **Talk**

## The dark side of stars

*Monday 6 May 2013 16:45 (30 minutes)*

I will talk about how compact stars such as white dwarfs and neutron stars can impose constraints on properties of dark matter models. Dark matter accumulation into neutron stars can change the thermal evolution of the star due to dark matter annihilation taking place inside the star. In the case of asymmetric dark matter, WIMP accumulation might lead under certain conditions to the formation of a black hole that can potentially destroy the star, thus imposing constraints on several models of dark matter.

The talk will be based on several papers, but mostly on two: Phys.Rev.Lett. 108 (2012) 191301; Phys.Rev.Lett. 107 (2011) 091301.

**Author:** KOUVARIS, Christoforos (CP3-Origins and Danish Institute for Advanced Study, University of Southern Denmark, Odense, Denmark)

**Presenter:** KOUVARIS, Christoforos (CP3-Origins and Danish Institute for Advanced Study, University of Southern Denmark, Odense, Denmark)

**Track Classification:** STARS2013