



Contribution ID : 115

Type : Talk

Searching for dark-matter waves with pulsar polarimetry

Thursday, 24 March 2022 18:02 (13)

In this talk I will explain how the polarization of photons emitted by astrophysical sources might be altered as they travel through a medium of dark matter composed of ultra light axion-like particles (ALPs). I will describe a new, more robust, analysis we developed to search for this effect. Afterwards, I will show the resulting strong limits on the axion-photon coupling for a wide range of masses. Finally, I will comment on possible optimal targets and the potential sensitivity to axionic dark-matter in this mass range that could be achieved using pulsar polarimetry in the future.

Presenter(s) : Mr. TEROL, Jorge (Instituto de Astrofísica de Canarias (IAC))

Session Classification : Dark matter