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## Spectral asymmetries of Galactic pulsars and the signature of photon-ALPs mixing

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**Abstract** : Axion-like particles (ALPs) as an extension of the standard model define a generic class of light pseudo-sclars with a rich phenomenology because of their coupling to photons. Here we explore a so-far neglected opportunity to search for ALPs-photon coupling in the disappearance channel, i.e. a characteristic energy dependent suppression of gamma-rays. To verify this phenomenon we use seven years of Fermi-LAT Pass 8 data with P8R2\_SOURCE\_V6 IRFs of two gamma-ray pulsar sources and investigate the presence of spectral features of them in accordance with photon-ALPs coupling using particular models of the large-scale Galactic magnetic field. We estimate best fit values of parameters like photon-ALPs coupling and ALPs mass.

Summary

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