Contribution ID: **181** Contribution code: **S4 High Energy and Particle Physics** Type: **Oral Presentation**

Analysis of the gamma-ray halo candidate 3HWC J1928+178 with Fermi-LAT data.

Friday 24 June 2022 09:15 (15 minutes)

The detection of a very extended gamma-ray emission around the Geminga and Monogem pulsars at TeV energies has set a new class of gamma-ray sources called gamma-ray halo. These objects are characterised by the presence of a rather old pulsar (˜100 kyr), emitting electrons and positron that are escaping and diffusing away into the interstellar medium, producing a large scale gamma-ray emission by inverse Compton scattering. A gamma-ray halo has also been detected at GeV energy around Geminga by the Fermi-LAT. Appart from Geminga and Monogem, a few other gamma-ray halo candidates have been proposed, amongst them the TeV source 3HWC J1928+178 detected by HAWC.
In this contribution, I present the analysis of the region of 3HWC J1928+178 with 13 years of fermi-LAT data, in order to assess the presence of a gamma-ray halo around 3HWC J1928+178 at GeV energies.

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Session Classification: S4 High Energy and Particle Physics

Track Classification: High Energy and Particle Physics