Contribution ID: 52

Study of particle escape effects in the LHAASO detected sub-PeV pulsar wind nebulae

Tuesday, 26 July 2022 13:42 (2 minutes)

Recently, the Large High Altitude Air Shower Observatory (LHAASO) reported discovery of 12 ultrahighenergy (UHE; $\varepsilon > 100$ TeV) gamma-ray sources located in the Galactic plane. We have used the multiwavelength radiation from these sources by considering a PWN origin, where the emission is powered by timedependent spin-down luminosity of the associated pulsars. In this time-dependent leptonic emission model, the electron population is calculated at different times under the radiative (synchrotron and inverse-Compton) and adiabatic cooling. The escape of particles from these PWN has been studied and their effects on the model parameters is estimated.

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Session Classification: Poster flash talks

Track Classification: GA