Contribution ID: **964** Type: **Talk**

Observations of extended very-high-energy halos around Geminga and Monogem with the LHAAS0-KM2A

Tuesday 20 July 2021 19:18 (12 minutes)

Gamma-ray halos around pulsars at very-high energies are an effective probe of particle propagation in the interstellar medium. Using the data collected by the half-array of the Large High Altitude Air Shower Observatory (LHAASO), we study the morphologies and spectra of the >25 TeV gamma-ray emission around Geminga and Monogem. The significance of Geminga (Monogem) above 25 TeV is ~10sigma (~7sigma) assuming a point source template with one-year's exposure of the half array. Energy-dependent morphologies are investigated, which are very useful in constraining the energy-dependence of the diffusion coefficient. The energy spectra of Geminga and Monogem are also analyzed.

Keywords

Diffusion process; pulsar halo ; Geminga; lhaaso

Collaboration

Lhaaso

other Collaboration

Subcategory

Experimental Results

Primary author: GUO, yingying

Co-authors: Prof. ZHANG, yi (pmo); Prof. YUAN, qiang (pmo); Prof. HU, hongbo (ihep)

Presenter: GUO, yingying

Session Classification: Discussion

Track Classification: Scientific Field: GAI | Gamma Ray Indirect