Contribution ID: **679** Type: **Poster**

Study of the morphology of the region surrounding eHWC J1850+001

Friday 16 July 2021 19:18 (12 minutes)

Although at extreme energies (>50 TeV) γ-ray sources generally have large angular separations from one another as observed on Earth, at lower energies in the galactic plane this is often not the case. HAWC observes extended emission from the source eHWC J1850+001 exceeding 50 TeV, and at lower energies this region appears to consist of multiple sources of γ-ray emission. These include the 3HWC J1849+001 source but also two nearby H.E.S.S. sources observed in their Galactic Plane Survey. Therefore, a full description of the region requires a morphological study including the full energy range of HAWC data. Understanding the spatial features of the emission in this region is important to associate the sources observations at other wavelengths, which may point to hadronic or leptonic origins for the γ-ray emission. There are multiple pulsar wind nebulae and super nova remnant systems in the vicinity that may be responsible for the emission in this region, including the pulsar PSR J1849+001 and its pulsar wind nebula, which is a likely candidate for the >50 TeV energy emission seen by HAWC.

Keywords

VHE; PWN; SNR; HAWC; multisource; likelihood;

Collaboration

HAWC

other Collaboration

Subcategory

Experimental Results

Primary authors: BRISBOIS, Chad (University of Maryland); FOR THE HAWC COLLABORATION

Presenter: BRISBOIS, Chad (University of Maryland)

Session Classification: Discussion

Track Classification: Scientific Field: GAI | Gamma Ray Indirect