

Investigating the origin of the TeV γ -rays in HESS J1640-465

Wednesday, 31 July 2024 14:20 (30 minutes)

HESS J1640-465 is a powerful source of very high energy γ -rays and possibly the most luminous TeV source in the Milky Way. It is also associated with a radio supernova remnant (SNR) and an X-ray PWN powered by an energetic pulsar. Determining the origin of the VHE γ -rays requires measuring, and modeling the broadband non-thermal emission of this source. My recent analysis of the X-ray PWN and associated γ -ray emission indicates that a PWN powered by the energetic pulsar could produce the observed γ -rays under some peculiar conditions; a conclusion testable by measuring the previously undetected radio properties of this PWN. I was recently awarded a MeerKAT observation to do that, and in this talk, I will present the properties of the detected PWN and the additional information it provides.

Session Classification: Galactic