

VERITAS observations of TeV J2032+4130

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Abstract. The nature and extent of the unidentified VHE gamma-ray emitter TeV J2032+4130 has long been a matter of interest. This source is coincident with the extended VHE gamma-ray source MGRO J2031+41 and close to both the Fermi pulsar LAT PSR J2032+41 and the OB association Cygnus OB2, but definite counterparts to this source have yet to be determined. The VERITAS observatory is an array of four atmospheric Cherenkov telescopes located at the base of Mt. Hopkins in southern Arizona, USA. We report here in detail on VERITAS observations of the region around TeV J2032+4130, comprising more than 10 hours of effective observing time and taken as part of the VERITAS VHE gamma-ray survey of the Cygnus region. The VHE flux sensitivity of these observations is better than the average survey sensitivity of 4% of the Crab Nebula at energies above 200 GeV.

Keywords: gamma rays galactic observations

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