

VERITAS Observations Of The Region Around SNR W44

Viatcheslav Bugaev* for the VERITAS collaboration[†]

* Washington University, St Louis, USA (bugaev@wuphys.wustl.edu)

[†] see R.A. Ong et al (these proceedings) or <http://veritas.sao.arizona.edu/conferences/authors?icrc2009>

Abstract. The W44 supernova remnant is a good candidate for the production of gamma rays from hadronic cosmic ray interactions. The morphology of the remnant, together with observations of maser emission provide a strong evidence of interaction with a dense molecular cloud. The presence of two unidentified sources HESSJ1857+026 and HESSJ1858+020 within $\simeq 2^\circ$ radius makes this a particularly interesting region for observations. We present results of 13h observations of high energy gamma-ray emission in the region around SNR W44 with VERITAS, an array of four 12 m imaging atmospheric Cherenkov telescopes during May-June 2008 and October 2008. We report on the results of observations of the two HESS unidentified sources and the level of gamma-ray emission from W44 itself.

Keywords: VERITAS gamma rays SNR

I. ACKNOWLEDGMENTS

This research is supported by grants from the US Department of Energy, the US National Science Foundation, and the Smithsonian Institution, by NSERC in Canada, by Science Foundation Ireland, and by STFC in the UK. We acknowledge the excellent work of the technical support staff at the FLWO and the collaborating institutions in the construction and operation of the instrument.