

# Multi-Wavelength Study of HESS J1809-193: Suzaku and Chandra Observations of the North-East Extension

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Multi-wavelength observations of the HESS J1809–193 field reveal a complex picture. Although the majority of the bright TeV emission can be attributed to the pulsar-wind nebula (PWN) of PSR J1809–1917, several supernova remnants, as well as another PWN, may contribute to the observed VHE emission. The H.E.S.S. image shows an extension toward north-east, which could be a separate TeV source. We present preliminary results from three Chandra and two Suzaku observations of this region. One of the X-ray sources in the field is the low-mass X-ray binary candidate XTE J1810-189, for which we show the outburst history from multiple observatories. We present our analysis of the gamma-ray (Fermi), radio and X-ray data for this region. Preliminary multi-wavelength classification is presented for the brightest X-ray sources in the Chandra ACIS fields. We investigate whether there is any correlation between the TeV “extension” and any of the sources seen at lower energies. This research was partially supported by NASA grants NNX10AH82G, NNX09AC81G, and NASA/SAO grant GO3-14049X.

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