

SEARCH FOR TEV GAMMA-RAY EMISSION FROM THE YOUNG OPEN STAR CLUSTERS BERKELEY 87 AND IC 1805 WITH THE HEGRA SYSTEM OF CHERENKOV TELESCOPES

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The still open question for the origin of cosmic rays has motivated to search for other acceleration sites than shell type super nova remnants. It has been argued that Galactic young open star clusters could contribute to the acceleration of the observed flux of cosmic rays. Two nearby young open clusters are Berkeley 87 and IC 1805 (0.9 kpc and 2.4 kpc resp.), both containing members with strong stellar winds (up to 5200 km/s for Berkeley 87 and 3800 km/s for IC 1805), thus favouring a shockfront acceleration scenario. The association of the EGRET source 2EG J2019+3719 with Berkeley 87 as well as COS B and EGRET sources in the neighbourhood of IC 1805 give a further motivation for VHE observations of these objects and their neighbourhood. Observations of the nearby young open star clusters Berkeley 87 and IC 1805 (10h and 15h observation time resp.) as well as the COS B source CG135+1 (21h) have been carried out in the TeV energy range with the System of Stereoscopic Air Cherenkov Telescopes of the HEGRA Collaboration. The results will be presented.