

TIME-DEPENDENT ANALYSIS OF HERCULES X-1 OBSERVATIONS WITH THE HEGRA CHERENKOV TELESCOPE SYSTEM

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The X-ray binary Hercules X-1, consisting of an accretion-powered pulsar (about $1.3 M_{\odot}$) and its companion star Hz Her (about $2.2 M_{\odot}$), is a well studied object in a wide range of the electromagnetic spectrum. Except for the 1.24s pulsar period and the 1.7d orbital period, the system shows a 35d cycle of varying X-ray intensity which is permanently measured by the RXTE All Sky Monitor since 1994. From August 1999 to August 2000 Hercules X-1 was monitored with the stereoscopic system of five imaging atmospheric Cherenkov telescopes (IACT) of the HEGRA Collaboration at $E_{thr} > 0.5$ TeV. The observation is motivated by a 3σ excess from the direction of Hercules X-1 observed with the HEGRA Scintillator and AIROBICC array ($E > 20$ TeV) in 1993/94. In addition to the 1999/2000 data (all collected during the anomalous low state which ceased at the end of 2000) further data are scheduled to be taken in 2001. The results of a time dependent analysis will be presented.