

CAT telescope VHE measurements on Mrk421 and Mrk501 and implications on blazar phenomena

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Two blazars, Mrk421 and Mrk501, have been so far detected at TeV energies by the CAT telescope operating in the French Pyrenees. The observed Very High Energy (VHE) emission from Mrk501 exhibits dramatically different behaviour in the quiescent and flaring states: the steep power-law spectrum seen in the low-activity state of 1998 contrasting with the harder, curved spectrum in the high-activity state of 1997. Mrk421 observations, on the other hand, are consistent with a power-law spectrum from the low-to-midrange intensities seen in 1998.

The VHE spectra, considered along with the low-energy (X-ray) behaviour of these sources, shed light on gamma-ray production and absorption mechanisms within blazar jets.