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VHE gamma-ray observations of transient and variable stellar objects with the MAGIC telescopes

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Transient and variable stellar objects provide a proper environment for particle acceleration and radiation of GeV-TeV gamma-rays. MAGIC Collaboration has carried out deep observations of different transient and variable stellar objects. Here we highlight 5 of them: LS I +61 303, MWC 656, SS 433, Cygnus X-1 and SN 2014J. We present the results of those observations, including long-term monitoring of Cygnus X-1 and LS I +61 303 (7 and 8 years, respectively). Cygnus X-1 is one of the brightest X-ray sources and best studied microquasars along a broad range of wavelengths whose steady and variable signal was searched by MAGIC within a multiwavelength scenario. The latest results of two peculiar objects, MWC 656 and SS 433, are also shown in this presentation. The former is the first detected high-mass X-ray binary system that is composed of a black hole and a Be star and the latter is the only super-critical accretion system known in our galaxy. Finally, we report the observations of SN 2014J, the nearest Type Ia SN of the last 40 years. Its proximity and early observation gave a remarkable opportunity to study important features of these powerful events.

Collaboration

MAGIC

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