

## The jets of SS 433 as seen by HESS

*Monday, 4 July 2022 16:00 (15 minutes)*

The microquasar SS 433 is the only known compact binary system in which accretion is believed to occur in the super-Eddington regime. This leads to the launching of two persistent, semi-relativistic jets that extend from the binary, almost perpendicular to the line of sight. X-ray observations reveal that these jets extend out to around 100 pc on either side of the central system, terminating at the radio structure W50. The jets of SS 433 were recently reported to be a source of TeV gamma-rays by the HAWC collaboration. We report here the result of deep observations of this system with the H.E.S.S. array of telescopes, resulting in the first detection of the system by an Imaging Atmospheric Cherenkov Telescope array. The superior energy and angular resolution of the H.E.S.S. array allow for a detailed study of the morphology and spectral energy distribution of the gamma-ray emission in the jets. This information can be used to constrain parameters of the jet dynamics, as well as provide information on the particle acceleration taking place in the jets.

**Primary author:** OLIVERA NIETO, Laura (Max Planck Institut fur Kernphysik MPIK)

**Co-author:** HESS COLLABORATION

**Presenter:** OLIVERA NIETO, Laura (Max Planck Institut fur Kernphysik MPIK)

**Session Classification:** Contributed Talks