

Search for VHE gamma-ray emission from the TDE candidate AT 2021uqv with H.E.S.S.

Tidal Disruption Events (TDEs) are a relatively young class of transient phenomena, which occur when the star approaches the SMBH so close that it is ripped apart by the tidal forces. Part of the stellar debris forms an accretion disc, resulting in a flare of electromagnetic radiation, which is typically detected in optical/UV and X-ray energy bands. Some TDE candidates have been also detected in radio and non-thermal X-ray that suggests active particle acceleration to relativistic energies. However, up to now, there are no TDEs detected in gamma rays, neither in HE (100 MeV - 100 GeV) nor in VHE (100 GeV - 100 TeV) regime. In 2021, the H.E.S.S. collaboration observed the TDE candidate AT 2021uqv as part of its TDE program. No significant VHE gamma-ray emission was detected in ~27h of observations, and therefore, spectral upper limits are presented. In addition, we also discuss a multi-wavelength picture of AT 2021uqv.

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