Detection of J2019+368: a case study of very-large-zenith angle observations with H.E.S.S.

Observations at very large zenith angles (VLZA) can push the sensitivity of IACTs towards higher energies. There are successful examples of VLZA observations presented by MAGIC and VERITAS. Besides covering the broader energy range, the operation of Cherenkov telescopes under VLZA could increase the exposure duty cycle for observing the transient events. The updated scientific strategy of H.E.S.S. has a significant focus on the detection of transient phenomena, which makes that the development of the VLZA technique is of crucial importance for upcoming future observations. We present a detection of the low-altitude source J2019+368 using VLZA-only operation and discuss the capabilities and limitations of H.E.S.S. instrument for this type of observations.

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