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A preliminary All-sky search of Flaring and transient in the TeV gamma-ray sky observed by HAWC

The long-term operation of HAWC provides valuable opportunities to study transient and variability phenomena in sources emitting at TeV energies. In this work, we introduce the All-sky Root around in an Unbiased way (ARU) algorithm, a tool designed to estimate the significance of deviations from constant emission on different timescales using data from ground-based gamma-ray observatories. We compute the expected sensitivity of ARU for HAWC data. Finally, we present preliminary results on flaring sources detected within HAWC's field of view and their corresponding variability indices

Collaboration(s)

HAWC

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