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CONSTRAINTS ON THE VERY HIGH ENERGY GAMMA-RAY EMISSION FROM GRB170206A WITH HAWC.

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Gamma-ray bursts (GRBs) are among the most luminous sources in the universe. The nature of their emission at TeV energies is one of the most relevant open issues related to these events. Due to its large field of view and duty cycle, HAWC is ideal for studying transient phenomena with gamma-ray emission and probing different model assumptions. In this work, we search for gamma-ray emission in the energy range of 80 to 800 GeV coming from GRB 170206A, the third brightest short GRB detected by Fermi-GBM. We show that the upper limits obtained from HAWC (with a 90% confidence level) would be capable of restricting the synchrotron-self Compton model in the fast cooling regime when a typical redshift value for short GRBs is assumed.

Keywords

Gamma-ray bursts; Transient phenomena; the synchrotron-self Compton model.

Collaboration

HAWC

other Collaboration

Subcategory

Theoretical Results

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