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Gamma-ray burst observations with the H.E.S.S. Air Cherenkov array

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Abstract content

Gamma-ray bursts (GRBs) are among the potential very-high-energy (VHE) gamma-ray sources. VHE emission from GRBs is predicted by most GRB models. Despite its generally fast-fading nature in many wavebands, the time evolution of any VHE radiation is still not clear. The highest energy radiation from GRBs ever detected firmly by any instrument was a 18 GeV photon coming from GRB 940217 detected with EGRET about 1.5 hour after the onset of the GRB. There is also a tentative detection using MILAGRITO of TeV excess events from GRB 970417a. In order to probe the largely unexplored VHE spectra of GRBs, a GRB observing program has been set up by the H.E.S.S. collaboration. With the high sensitivity of the H.E.S.S. array, VHE flux levels predicted by GRB models are well within reach. Extra-galactic background light absorption is taken into account in cases where redshifts are known. We will present the H.E.S.S. observations of and results from some of the reported GRB positions during the past few years.

If this papers is presented for a collaboration, please specify the collaboration

H.E.S.S.

Summary

Reference

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