

Inverse Compton emission revealed by observations up to TeV energies of GRB 190114C

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The hunt for Gamma-Ray-Bursts (GRBs) at very high energy (VHE) started more than 20 years ago. A hint of emission was already claimed by Milagrito from the observations of GRB 970417.

On 19 of January the Major Atmospheric Gamma Imaging Cherenkov (MAGIC) clearly detected GRB 190114C above 0.2 TeV. This is the first highly significant detection (over 50sigma reached in the first few tens of minutes after the burst) of a GRB at VHE. GRB190114C was also detected by several other instruments providing a wealth of multi-wavelength data across 17 orders of magnitude in energy. The detection of GRB190114C by MAGIC reveals a spectral component at the highest energies incompatible with being originated by synchrotron emission processes. In this talk we will present the detection of GRB 190114C and the interpretation of its emission resulting from a complete multi-wavelength study.

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