

## GRB221009A: The brightest GRB ever detected by Fermi-LAT

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In this contribution we present the analysis of GRB221009A, the brightest Gamma-Ray Burst (GRB) ever detected by the Fermi Large Area Telescope (LAT). The burst triggered the Gamma-Ray Burst Monitor (GBM), and the high-energy emission of the triggering pulse started in the LAT before the associated low-energy component detected by the GBM. During the prompt phase, we identified a Bad Time Interval (BTI) of 63 seconds due to the very high intensity of hard X-rays. However, we were able to determine sub-intervals where standard analysis could be performed. The late time emission decays as a power law, but its extrapolation based on the first 450 seconds suggests that the afterglow started during the prompt emission. Furthermore, we found that the high-energy events detected by the LAT cannot have a Synchrotron origin but, during the prompt emission, they are probably associated with an additional Self Synchrotron Compton (SSC) component. Late time high-energy events are instead harder to explain as products of SSC or TeV electromagnetic cascades, which raises questions regarding their origin. Overall, GRB221009A, stands out compared to other Fermi-LAT GRBs, indicating that it is an exceptionally rare event.

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