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The Cherenkov Telescope Array capabilities for GRB follow-up

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Gamma-ray Bursts (GRBs) have always been considered within the highest priority targets for all modern imaging atmospheric Cherenkov telescopes (IACTs). For a long time, the detection of such events in the very-high-energy band (VHE; $E > 100$ GeV) posed a major challenge for IACTs from both the technical and the scientific point of view. On the other hand, it was well proven that the possibility to catch the VHE counterpart from GRBs is crucial for achieving a better comprehension of the physics of these objects. In this framework, the detection of VHE gamma rays from a bunch of events including GRB 180720B, GRB 190114C, GRB 190829A and GRB 201216C, represents a long-awaited result for VHE astrophysics community and a remarkable step forward in our understanding of GRBs dynamics. In the next future, the Cherenkov Telescope Array (CTA) will routinely perform follow-up observations of GRB triggers with a significant improvement in VHE photon statistics allowing to produce good-quality, time-resolved spectra. The detection prospects for such a type of observations are necessarily still preliminary and dependent on the final array layout as well as the assumptions on the expected GRB population. Within the framework of the CTA Transient working group, a dedicated team is at work to establish the CTA capabilities in GRB science starting from a theoretical-based approach. In this contribution, we will report about the status and prospect of this work.

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