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Observations of Gamma-ray Bursts with VERITAS and Whipple

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Abstract content

Many authors have predicted very high energy (VHE; E > 100 GeV) emission from gamma-ray bursts (GRBs) both during the prompt phase and during the multi-component afterglow. To date however, there has been no definitive detection of such emission. Recently, Swift made the exciting discovery that almost half of GRBs are accompanied by one or more X-ray flares which are found to occur from several seconds to many hours after the prompt emission. The discovery of this phenomenon and the many predictions that VHE emission should accompany these flares increases the already strong motivation for making immediate follow-up VHE observations of GRBs. Observations of GRBs have high priority at VERITAS, preempting any observations which may be in progress. GRB alerts are received from the GCN via a socket connection and this is interfaced to the VERITAS Tracking Software to minimize the time between a notification arriving and the telescope being commanded to slew to the GRB. We report here on GRB observations with VERITAS and with the Whipple Telescope from 2005 through 2007. The substantial sensitivity of VERITAS to GRB emission over many time-scales is also discussed.

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

The VERITAS Collaboration

Summary

Reference

Proceedings of the 30th International Cosmic Ray Conference; Rogelio Caballero, Juan Carlos D'Olivo, Gustavo Medina-Tanco, Lukas Nellen, Federico A. Sánchez, José F. Valdés-Galicia (eds.); Universidad Nacional Autónoma de México, Mexico City, Mexico, 2008; Vol. 3 (OG part 2), pages 1107-1110

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