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Simultaneous observation of GRB060602B with the H.E.S.S. Air Cherenkov array

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Abstract content

On June 2, 2006, the Swift Burst Alert Telescope (BAT) triggered a bursting event in the 15-350 keV energy band which lasted ˜9 sec. The burst position was being observed with the H.E.S.S. array of four Imaging Atmospheric Cherenkov Telescopes (IACTs) at energies above 100 GeV throughout the duration of the burst, and both before and after the burst. A total of ˜5 hours of observation was obtained during that night. This is the first simultaneous observation of a soft gamma-ray bursting event with an IACT instrument. The Swift X-ray Telescope detected an X-ray counterpart starting from 83 sec after the BAT trigger. No optical/infrared counterpart was found. Due to the very soft BAT spectrum of the burst compared to other Swift gamma-ray bursts (GRBs) and its proximity to the galactic center, the burst might have been caused by a galactic X-ray burster (e.g. a low-mass X-ray binary), although the possibility of it being a cosmological GRB cannot be ruled out. We will discuss the implications of the observational data according to different bursting scenarios.

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

H.E.S.S.

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 1115-1118

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