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## A Spectacular VHE Gamma-ray Outburst from PKS 2155-305 in 2006

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### Abstract content

A spectacular outburst of VHE ( $>100$  GeV) gamma-ray emission was observed from PKS 2155-304 in 2006 with the H.E.S.S. experiment. The VHE flux reached levels of  $\sim 20$  times the Crab Nebula flux, more than 2 orders of magnitude above typical values observed from the object. This extremely high flux, when coupled with the sensitivity of H.E.S.S., enables temporal studies of the emission with unprecedented resolution. Several fast flares, analogous to bursts, were resolved allowing for very strong constraints on the underlying physical processes. The temporal characteristics, spectral evolution and broadband characteristics of these 2006 outbursts will be presented. In addition, the challenges these data present to standard paradigms of TeV Blazars, particle acceleration processes, and radiation mechanisms will be discussed.

### If this paper is presented for a collaboration, please specify the collaboration

HESS 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 1081-1084

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