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Gamma-ray emission associated with the Cluster-scale AGN Outbursts in the Hydra A system

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Abstract content

Recent observations have revealed the existence of an enormously energetic $\sim 10^{61}$ erg AGN outburst in the Hydra A cluster of galaxies. This outburst has produced cavities in the intra-cluster medium, apparently supported by pressure from cosmic rays. Here we argue that these particles are very likely protons and nuclei. For a plausible spatial distribution of the target gas, based on observations and hydrodynamical simulations, we show that the π^0 -decay gamma-rays from these cosmic-rays could be detectable with the H.E.S.S. experiment.

If this papers is presented for a collaboration, please specify the 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 1013-1016

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