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Observations of 1ES 1101-232 with H.E.S.S. and at lower frequencies: A hard spectrum blazar and constraints on the extragalactic background light

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Abstract content

VHE observations of the distant ($z=0.186$) blazar 1ES 1101-232 with H.E.S.S. are used to constrain the extragalactic background light (EBL) in the optical to near infrared band. As the EBL traces the galaxy formation history of the universe, galaxy evolution models can therefore be tested with the data. In order to measure the EBL absorption effect on a blazar spectrum, we assume that usual constraints on the hardness of the intrinsic blazar spectrum are not violated. We present an update of the VHE spectrum obtained with H.E.S.S. and the multifrequency data that were taken simultaneously with the H.E.S.S. measurements. The data verify that the broadband characteristics of 1ES 1101-232 are similar to those of other, more nearby blazars, and strengthen the assumptions that were used to derive the EBL upper limit.

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

H.E.S.S. 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 957-960

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