## **30th International Cosmic Ray Conference**



Contribution ID : 286

Type : Oral

# Localising the H.E.S.S. Galactic Centre point source

Wednesday, 4 July 2007 08:54 (0:12)

### Abstract content

The detection of TeV gamma-rays from the direction of the Galactic Centre is one of the most exciting discoveries in recent years. Observations by the H.E.S.S. system of imaging atmospheric Cherenkov telescopes provide the most precise available data on this source in the energy range 150 GeV - 30 TeV. The vicinity of the kinetic centre of our galaxy harbours numerous objects which could potentially accelerate particles to very high energies and thus produce the gamma-ray flux observed. The centre-of-gravity of the point-like emission measured by H.E.S.S. is in good agreement with the position of the supermassive black hole Sgr A\* and the recently discovered PWN G359.95-0.04. Given a systematic pointing error of about 30", a possible association with the SNR Sgr A East could not be ruled out with data available from 2004. In this contribution an update is given on the position of the H.E.S.S. Galactic Centre source using 2005/2006 data. The systematic pointing error is significantly reduced using guiding telescopes for pointing corrections, making it possible to exclude with high significance Sgr A East as the source of the TeV gamma-rays.

#### 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. 2 (OG part 1), pages 589-592

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Session Classification : OG 2.1, OG 2.2

Track Classification : OG.2.2