30th International Cosmic Ray Conference

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Draco Observation with the MAGIC Telescope

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Abstract content

The nearby dwarf spheroidal galaxy Draco with its high mass to light ratio is a promising target for indirect dark matter (DM) searches. It is located at a distance of about 82 kpc, at the edge of the Milky Way. The dwarf galaxy is enclosed by a DM halo where the DM particle may annihilate and produce an observable gamma-ray flux. Among the different DM particle candidates the lightest supersymmetric (SUSY) particle, the neutralino, is most favored. The neutralino annihilation produces mainly a continuum emission with a characteristic cut-off at the neutralino mass. Accelerator experiments provide a lower mass limit of 45 GeV, thus the cut-off is expected to be between 45 GeV and several TeV.

The MAGIC telescope at the Canary Islands has the lowest trigger threshold of all ground based VHE observatories and is therefore best suited to search for these signals. The results of the current observations with MAGIC will be presented.

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

MAGIC

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. 4 (HE part 1), pages 745-748

Primary author(s) : STARK, L.S. (ETH Zurich, Switzerland)

Co-author(s) : BARTKO, H. (Max-Planck-Inst. für Physik, Munich, Germany); BILAND, A. (ETH Zurich, Switzerland); DORO, M. (INFN - Univ. Padova, Italy); GAUG, M. (INFN - Univ. Padova, Italy); LOMBARDI, S. (INFN - Univ. Padova, Italy); MARIOTTI, M. (INFN - Univ. Padova, Italy); PRADA, F. (IAA-CSIC Granada, Spain); RISSI, M. (ETH Zurich, Switzerland); SANCHEZ–CONDE, M. (IAA-CSIC Granada, Spain); VENTURINI, A. (INFN - Univ. Padova, Italy); ZANDANEL, F. (INFN - Univ. Padova, Italy)

Presenter(s) : RISSI, M. (ETH Zurich, Switzerland)

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