



Contribution ID : 64

Type : **Oral presentation**

Astrophysics with the H.E.S.S. Cherenkov Telescopes

Monday, 3 May 2010 15:00 (30)

The High Energy Stereoscopic System (H.E.S.S.) is a system of four Cherenkov telescopes for GeV/TeV gamma-ray astronomy. By observing Cherenkov light emitted by particles in gamma-ray induced air showers the direction and energy of the primary gamma-ray can be reconstructed. A stereoscopic view of the air shower is achieved by combining the information from the four telescopes, allowing for an accurate reconstruction and a high rejection of background cosmic rays.

The system has a sensitivity of 1% of the flux of the Crab nebula, the brightest steady source of gamma-rays in the sky, and a energy threshold of 100 GeV. The system is being upgraded with a new, 600 m² telescope, currently being built in the center of the array. This will not only increase the sensitivity in the currently accessible energy regime, but also lower the energy threshold to about 30 GeV.

H.E.S.S. has been operating since December 2003 and still continues to produce exciting results, including the recent detection of a VHE flare from the radio galaxy M87 and the detection of VHE emission from the starburst galaxy NGC 253.

In this presentation, technical aspects of the system will be discussed and high-lights from resent results presented.

Please indicate "poster" or "plenary" session. Final decision will be made by session coordinators.

Plenary

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Session Classification : Cherenkov detectors in astroparticle physics

Track Classification : Cherenkov detectors in astroparticle physics