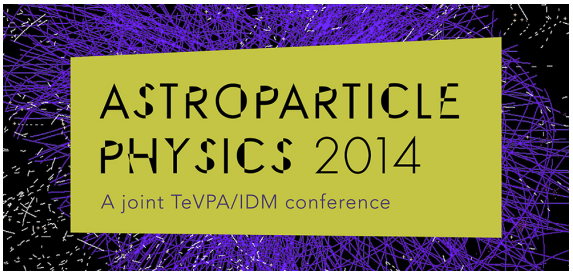

Contribution ID: **210** Type: **Presentation**

Indirect searches of Dark Matter from gamma-ray line signatures with the H.E.S.S. experiment

Wednesday, June 25, 2014 5:50 PM (15 minutes)

Weakly Interacting Massive Particles (WIMPs) are currently one of the most popular hypotheses to answer the question of the nature of Dark Matter. Gamma-ray line signatures from self-annihilation of WIMPs can be detected at very-high energies by the H.E.S.S. imaging air Cherenkov telescope in observations of the Galactic Center (GC) region. In 2012, phase II of H.E.S.S. started with the addition of a 28 m Cherenkov telescope, lowering significantly the energy threshold and giving the possibility to cross-check recent claims of line-like features in Fermi/LAT data. In this contribution, results on line-like feature searches using a 112 h exposure of the GC obtained with the higher threshold phase I of H.E.S.S. will be reviewed, and analysis procedures and sensitivity estimates for line searches with H.E.S.S. phase II will be discussed.

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Session Classification: Dark Matter: Indirect Detection

Track Classification: Dark Matter Indirect Detection