38th INTERNATIONAL CONFERENCE
ON HIGH ENERGY PHYSICS
AUGUST 3 - 10, 2016
CHICAGO

Contribution ID: **1298** Type: **Oral Presentation**

VERITAS Observations of the Galactic Center (15' + 5')

Thursday 4 August 2016 14:30 (20 minutes)

Weakly-interacting massive particles (WIMPS) are among the wide range of candidates for the dark matter (DM) that dominates the mass content of the universe. In some scenarios these WIMPs are self-annihilating. In regions of high dark matter density (such as our own Galactic Center) this self-annihilation is expected to produce a characteristic gamma-ray radiation signature that cuts off at the WIMP mass. Observations of these regions of high dark matter density with very-high-energy (VHE) gamma-ray telescopes can constrain a unique phase space of heavy WIMP masses. However, in the case of the Galactic Center gamma-ray emission arising from more conventional astrophysical sources complicates the interpretation of such observations. We provide an update on deep observations of the Galactic Center with VERITAS, an array of atmospheric Cherenkov telescopes sensitive to VHE gamma rays with energies between 85 GeV and 30 TeV.

Author: WEINSTEIN, Amanda (Iowa State University)

Presenter: WEINSTEIN, Amanda (Iowa State University)

Session Classification: Astro-particle Physics and Cosmology

Track Classification: Astro-particle Physics and Cosmology