Contribution ID: **54** Type: **not specified**

The Status of the Galactic Center Gamma-Ray Excess

Thursday, 14 September 2023 16:30 (15 minutes)

The Galactic Center Gamma-Ray Excess has a spectrum, angular distribution, and overall intensity that agree remarkably well with that expected from annihilating dark matter particles in the form of a ~50 GeV thermal relic. Previous claims that these photons are clustered on small angular scales or trace the distribution of known stellar populations once appeared to favor interpretations in which this signal originates from a large population of unresolved millisecond pulsars. More recent work, however, has overturned these conclusions, finding that the observed gamma-ray excess does not contain discernible small scale power, and is distributed with approximate spherical symmetry, not tracing any known stellar populations. In light of these results, it now appears significantly more likely that the Galactic Center Gamma-Ray Excess is produced by annihilating dark matter.

Primary author: HOOPER, Dan (Fermilab/University of Chicago)

Presenter: HOOPER, Dan (Fermilab/University of Chicago)

Session Classification: IDM: Indirect DM searches

Track Classification: Indirect DM searches