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Gamma-ray signal from SUSY Dark Matter TAKAHIRO YAMAMOTO, PEARL SANDICK, FEI TENG, Physics Astronomy at the University of Utah — Supersymmetric Standard Model dark matter which consists of weakly interacting massive particles with the mass of $\mathcal{O}(100)$ GeV has commonly been thought to be overdense in the current epoch of our Universe due to the chirality suppression of annihilation rate. Recently, however, new bulk region has been suggested to explain the correct dark matter relic density where the relatively light sleptons with the large chiral mixing and CP-violating phase can boost the dark matter annihilation into lepton pair. Such models are also severely tested by the precise measurements of magnetic and electric dipole moment of SM leptons. In this talk I will presented the possible signatures from the dark matter annihilation into Standard Model particles at the Galactic Center and constraints imposed on such models using gamma-ray spectrum data released by a various telescopes thus far.

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