

# Flavored Dark Matter and the Galactic Gamma-Ray Excess

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Room 415 Nieuwland Science Hall

Thermal relic dark matter particles with a mass of 31–40 GeV and that dominantly annihilate to bottom quarks have been shown to provide an excellent description of the excess gamma rays observed from the center of the Milky Way. Flavored dark matter provides a well-motivated framework in which the dark matter can dominantly couple to bottom quarks in a flavor-safe manner. We propose a phenomenologically viable model of bottom flavored dark matter that can account for the spectral shape and normalization of the gamma-ray excess while naturally suppressing the elastic scattering cross sections probed by direct detection experiments. This model will be definitively tested with increased exposure at LUX and with data from the upcoming high-energy run of the Large Hadron Collider (LHC).