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The féeton (B-L gauge boson) dark matter and its prediction in low-energy neutrino astronomy

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The often-considered dark matter (DM) candidates, e.g., WIMP and ALP, are in tension with observations, which motivates new proposals for DM. The recently proposed féeton dark matter, a B-L gauge boson with a small mass and a feeble coupling to the standard sector constitutes a well-motivated dark matter model consistent with cosmology, Seesaw mechanism, and leptogenesis. This model predicts nontrivial neutrino signals decayed from dark matter in the Milky Way and distant galaxies, which are promising for the future with low-energy neutrino experiments. We name it the féeton dark matter.

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