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The semi-visible dark photon

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Light dark sectors can explain the existence of dark matter and, if the new fermions carry lepton number, may also generate light neutrino masses. We revisit models where the dark photon A' couples to multiple generations of dark fermions. The decays A' are semi-visible: they contain visible particles but come accompanied by missing energy. We will show that these models can provide an explanation for the $g-2$ of muon and that they can lead to the effective violation of lepton flavor universality in B decays.

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