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Search for dark sector at BaBar

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Among dark matter theories, the possibility of dark sector(s) has recently received much attention. This class of models introduces a new dark sector with WIMP-like dark matter particles charged under a new Abelian gauge group. The corresponding gauge boson, dubbed a dark photon, must be lighter than a few GeV to explain recent astrophysical and terrestrial anomalies. The dark photon couples to the Standard Model through its kinetic mixing with the photon, and can therefore be produced at low-energy e+e- colliders in Bremsstrahlung reactions. We present a search for dark photon production at BaBar.

APS member ID

frankp

Primary author: ECHENARD, Betrand (Caltech)

Presenter: ECHENARD, Betrand (Caltech)

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