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Dark Matter Searches at Belle II, Belle, and BaBar

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The Belle II experiment at the asymmetric e^+e^- collider, SuperKEKB, is a substantial upgrade of the Belle/KEKB experiment. Belle II aims to record 50 ab^{-1} of data over the course of the project. During the first physics runs in 2018-2020, around 100 fb^{-1} of data were collected. These early data include specifically-designed low-multiplicity triggers which allow a variety of searches for light dark matter and dark-sector mediators in the GeV mass range.

This talk will present the very first world-leading physics results from Belle II: searches for the invisible decays of a new vector Z' , and visible decays of an axion-like particle; as well as the near-term prospects for other dark-sector searches. Many of these searches are competitive with the data already collected or the data expected in the next few years of operation. In this talk we also review the latest dark sector results from the first generation of B factories: BaBar and Belle.

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Collaboration / Activity

Belle II

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