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Searches for dark sector particles at Belle and Belle II

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The Belle and Belle II experiment have collected samples of e^+e^- collision data at centre-of-mass energies near the $\Upsilon(nS)$ resonances. These data have constrained kinematics and low multiplicity, which allow searches for dark sector particles in the mass range from a few MeV to 10 GeV. Using a 365 fb⁻¹ sample collected by Belle II, we search for inelastic dark matter and an Z' that decays to invisible particles. Using a 711 fb⁻¹ sample collected by Belle, we search for $B \to h + \text{invisible decays}$, where h is a π , K, D, D_s or p, and $B \to Ka$, where a is an axion-like particle.

Secondary track

T02 - Dark Matter

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Track Classification: T02 - Dark Matter