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How LHCb is shedding light on the existence of dark sector portals

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Although suggested by cosmological and astrophysical observables, no dark matter candidate has been observed to date. Potential mediators between the visible and dark sectors are receiving more and more attention since they offer the opportunity of discovering the nature of dark matter at collider experiments. The LHCb experiment, originally built for b - and c -physics, has proven to be uniquely sensitive to low-mass resonances. A focus is set on the search for Dark Photons in leptonic decays, hidden-sector bosons, and the newly published search for axion-like-particles. The prospects for those searches with the large Run 3 dataset will be shown as well.

Secondary track

T02 - Dark Matter

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