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Dark-sector physics at Belle II

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The Belle II experiment is in the unique position of probing a yet uncharted sector of particle physics, which includes hypothetical particles coupling very weakly with the standard model ones that might help explaining the nature of dark matter and other anomalies. Belle II analyzed 0.5 fb⁻¹ of commissioning data to exclude part of the parameter space of models including low mass Z' bosons and axion-like particles. The results of a new search for Dark-Higgstrahlung processes, obtained on the 2019 data set, are presented and longer-term reach on a variety of Dark Sector signatures are also discussed.

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