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Dark photon and light dark matter searches at Belle II

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The Belle II experiment at the SuperKEKB energy-asymmetric e^+e^- collider is a substantial upgrade of the B factory facility at the Japanese KEK laboratory. The design luminosity of the machine is 8×10^{35} cm^{-2}s^{-1} and the Belle II experiment aims to record 50 ab^{-1} of data, a factor of 50 more than its predecessor. During 2018, the machine has completed a commissioning run, recording a data sample of about 0.5 fb^{-1}. Main operations started in March 2019 with the complete Belle II detector: an integrated luminosity of 10 fb^{-1} has been collected so far. These early data sets, with specifically designed low multiplicity triggers, offer already the possibility to search for a large variety of dark sector particles in the GeV mass range, complementary to LHC and to dedicated low energy experiments. The talk will review the status of the dark sector searches at Belle II, with a focus on the discovery potential of the early data, and show the first results.

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