

ISR and FSR of Dark Photons

Monday 18 September 2023 17:10 (15 minutes)

We study the relevance of Initial- and Final-State radiation in QCD processes at the LHC as a production mechanism for dark photons. We implement dark photon splitting functions to quarks into the Monte-Carlo Generator Herwig and add it to the forward and backward evolution of the parton shower in LHC events. We simulate the most relevant forward physics processes, and identify in which way ISR and FSR radiations contribute to the overall production of dark photons in forward physics experiments like FASER/FASER2.

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