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Measurements of rare B meson decays properties with CMS Run2 data

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Rare B meson decays provide important input for studies of anomalies in $b \rightarrow sl^+l^-$ transitions. The $B_s^0 \rightarrow \mu^+\mu^-$ is an example of a process with theoretically clean predictions and a clear experimental signature making it a perfect match for BSM physics searches. Here we present a measurement of $B_s^0 \rightarrow \mu^+\mu^-$ branching fraction and effective lifetime in proton-proton collisions at $\sqrt{s} = 13\text{TeV}$ using data collected with the CMS detector through years 2016-2018, corresponding to an integrated luminosity of 140fb^{-1} . The measurement results are found to be consistent with the SM predictions.

Primary author: CMS COLLABORATION

Presenter: IVANOV, Todor

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