

Abstract Submitted
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Soft Photons and Leptonic B Decays KRISTOPHER HEALEY, ADITYA YECHAN GUNJA, ALEXEY PETROV, Wayne State University — The leptonic decay of the neutral B meson B_s^0 into a di-muon pair is an example of a flavor-changing neutral current (FCNC) process. Studies of such decay processes not only play an important role in probing the standard model (SM) of particle physics but also provide sensitive indirect searches for new physics (NP) which predict substantial increases over the suppressed SM branching ratio. We look at the possible contributions to the standard model prediction stemming from decays with an additional outgoing photon, thus lifting a suppression that is existent in the predominant decay. While technically a different process, these additional contributions may be included in experimental measurements thus inflating the reported branching ratio.

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