

Abstract Submitted
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Measurement of the $W + b\bar{b}$ Cross Section at CMS THOMAS PERRY, University of Wisconsin - Madison, CMS COLLABORATION — The production of a W boson in association with a pair of b quarks is studied using proton-proton collisions at $\sqrt{s} = 8$ TeV in a data sample collected with the CMS experiment at the LHC corresponding to an integrated luminosity of 19.8 /fb. While previous experiments found tension between simulation and data when looking for a W boson plus at least one b quark, this study requires exactly two well separated b-tagged jets each with a transverse momentum $p_T > 25$ GeV and falling within the pseudorapidity range $|\eta| < 2.4$. The W boson is identified by its decay to missing energy along with either an electron or a muon having $p_T > 30$ GeV and $|\eta| < 2.1$. The cross section is computed from the unfolding of the reconstructed final-state objects to their corresponding generator-level definitions and comparisons are made between Madgraph+Pythia and MCFM using four-flavor and five-flavor schemes.

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