

Abstract Submitted
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Search for Randall-Sundrum Gravitons at CMS YOUSU MA, California Institute of Technology, CMS COLLABORATION — We describe the search for Randall-Sundrum (RS) gravitons decaying in the diphoton channel at the CMS Experiment, with 33.9 pb^{-1} of $\sqrt{s} = 7 \text{ TeV}$ proton-proton collision data. We find the spectrum to agree with our expectations based solely on the standard model, and find no evidence for a resonance. We therefore derive limits on the cross-section for the production of RS gravitons, and hence on the parameters of the warped extra dimension model. For values of the coupling parameter ranging from 0.01 to 0.1, we find that at 95% confidence level, graviton masses below 330 to 850 GeV/c^2 are excluded.

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