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Effects of Dynamical Compactification on D-Dimensional Gauss-Bonnet FRW Cosmology KEITH ANDREW, BRETT BOLEN, Western Kentucky University, CHAD MIDDLETON, Mesa State College — We examine the effect on cosmological evolution of adding a string motivated Gauss-Bonnet term to the traditional Einstein-Hilbert action for a (1 + 3) + d dimensional Friedman-Robertson- Walker (FRW) metric. By assuming that the additional dimensions compactify as the usual 3 spatial dimensions expand, we find that the Gauss Bonnet terms give perturbative corrections to the FRW equations. We find corrections that appear in the calculation of both the Hubble constant, H0, and the acceleration parameter, q0, for a variety of cases that are consistent with a dark energy equation of state.

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