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Anomaly Cancellation in Effective Supergravity Theories from the Heterotic String: Two Simple Examples[1] JACOB LEEDOM, MARY GAILLARD, Univ of California - Berkeley — We use Pauli-Villars regularization to evaluate the conformal and chiral anomalies in the effective field theories from Z3 and Z7 compactifications of the heterotic string without Wilson lines. We show that parameters for Pauli-Villars chiral multiplets can be chosen in such a way that the anomaly is universal in the sense that its coefficient depends only on a single holomorphic function of the three diagonal moduli. It is therefore possible to cancel the anomaly by a generalization of the four-dimensional Green-Schwarz mechanism. In particular we are able to reproduce the results of a string calculation of the four-dimensional chiral anomaly for these two models.

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Jacob Leedom
Univ of California - Berkeley

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