## Phenomenology 2018 Symposium



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## Anomaly Cancellation in Effective Supergravity Theories from the Heterotic String: Two Simple Examples

Tuesday 8 May 2018 18:00 (15 minutes)

We use Pauli-Villars regularization to evaluate the conformal and chiral anomalies in the effective field theories from  $Z_3$  and  $Z_7$  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.

## Summary

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