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Title: On the mixed 0-form/1-form anomaly: pouring the new wine into old bottles

Abstract:

The mixed anomaly between parity/discrete chiral symmetry and center symmetry, for 4d theories with arbitrary gauge groups, is studied in the Hilbert space framework. It is shown to lead to an exact degeneracy of appropriate “discrete electric flux states, for arbitrary size of the spatial three-torus, with implications for semiclassics, the infinite volume limit, and dualities.