String probes, simple currents, and the no global symmetries conjecture

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Abstract

String probes are a useful tool to study the properties of quantum field theories coupled to gravity. In this talk I will present a link between the global form of the gauge group of supergravity theories and extensions of the strings' chiral algebra by simple current operators, which gives a novel explanation for the absence of global center one-form symmetries in a variety of supergravity theories, including in models that currently lack a known realization within string theory. This talk is based on works with Luca Novelli and Yann Proto.

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