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TITLE: Light Paraphotons and Mini-charged Particles in Realistic Extensions of the Standard Model

## ABSTRACT:

Particles with small, unquantized charge arise naturally in so-called paraphoton models, containing, beyond the usual electromagnetic U(1) gauge factor, additional hidden-sector U(1) factors: particles with paracharge get an induced electric charge proportional to some small mixing angle between the kinetic terms of photons and paraphotons. In this talk, we point out that multiple U(1) factors, kinetic-mixing, and mini-charged particles occur naturally in realistic embeddings of the standard model into string theory. They may lead to observable effects in dedicated laboratory experiments.