The Photinoverse

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Abstract

Typical O3/O7 orientifolds on Calabi-Yau three-folds give rise to a "Photoverse" containing several massless U(1)s originating from compactifying the Ramond-Ramond four-form on three-cycles. While the phenomenology of these U(1)s themselves has been investigated in the past, effects related to their superpartners, their photinis, remain less well explored. This talk addresses some of the potential constraints originating from the "Photinoverse". In particular, we will motivate couplings to the visible sector in type IIB string theory. Then, within the LVS we will estimate their masses and thier couplings. Using these insights, we finally comment on implications for early- and late-time cosmology.

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