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General bounds on hidden CFTs

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I present the most general bounds we can make on operators in hidden CFTs, which are weakly coupled to the SM via a heavy mediator. The conformal symmetry dictates an unusual phase space for the generated particles, which led H. Georgi to coin the term 'Unparticles'. Using the unparticle formalism, we constrain a large class of hidden valley theories without the need to specify their particle and symmetry content.

Our novel result is a consistent theory of unparticle final states in a generic CFT, where previous searches specialised to specific unparticle operators, and its application to current experimental runs. The phenomenology includes collider searches (LHC 2) and low- E experiments.

Parallel Session

Alternatives to Supersymmetry

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