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Scattering Amplitudes of Massive Spin-2 Particles in Extra Dimensional Theories

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We present a first complete calculation of scattering amplitudes of massive spin-2 Kaluza Klein resonances in extra dimensional theories. Although individual contributions of Kaluza-Klein particle scattering can grow as fast as E^{10}, intricate cancellations ensure that the full scattering amplitudes grow only as fast as E^2. We provide the necessary sum-rules that ensure such cancellations and describe the anatomy of these scattering amplitudes in both flat-toroidal as well as warped models in Anti-De-Sitter space. We contrast this calculation with theories of massive gravity and its extensions.

Summary

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