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Gravitational Positivity Bounds on Dark Sector

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The positivity of the scattering amplitude is a necessary condition for a low-energy effective field theory (EFT) to be UV complete. The gravitational positivity bound provides quantitative “swampland” constraints for low-energy EFTs to be UV complete within quantum gravity. The condition can give significant constraint on a feebly interacting particle model and its UV completion. In this talk I will discuss the outlines of the gravitational positivity bound and its phenomenological application to a dark gauge sector.

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