

Positivity bounds in effective field theories

Tuesday, April 16, 2019 11:00 AM (30 minutes)

Requiring an analytic and unitary UV completion for a low energy effective field theory (EFT) can impose positivity bounds on the Wilson coefficients of the EFT. These positivity bounds take the form of constraints on combinations of the pole subtracted scattering amplitude and its derivatives, and are valid away from the forward limit and for any spins. Furthermore, positivity bounds with nonlinear dependence on the amplitude can also be obtained. I will also discuss applications of the positivity bounds to galileon theory and standard model effective field theory.

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