

Amplitudes and perturbative unitarity bounds

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I will present a formalism based on spinor-helicity techniques that generalizes the formulation of perturbative unitarity bounds. I will discuss unitarity bounds for $N \rightarrow M$ scattering processes (with $N, M \geq 2$), which are important for high-energy future colliders. I will also address bounds for spin-2 and higher-spin theories, which are relevant for effective field theories of gravity and are not approachable by standard methods. Finally, I will emphasize the power and complementarity of positivity and perturbative unitarity bounds to constrain the parameter space of effective field theories.

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