Contribution ID: **19** Type: **not specified**

Positive sum rules in gravitational EFTs

Wednesday, 2 June 2021 16:30 (40 minutes)

We explore constraints on low-energy dynamics which stem from assuming causality of 2->2 scattering at all energy scales. I will review a key ingredient added recently: low-energy crossing symmetry, which bounds the couplings of spinning heavy states and ensures that sum rules are dominated by (unknown) states of low spin. Gravity is special since its tree-level energy growth already requires a UV completion. This implies roughly that gravity is attractive at all scales. I describe model-independent constraints which exploit low-energy crossing to account for the graviton pole.

Presenter: CARON-HUOT, Simon