JOINT TUFTS/MIT COSMOLOGY SEMINAR

Spin-2 scattering amplitudes and asymptotic superluminality

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I will describe constraints imposed on theories with spin-2 particles by relativistic causality. Specifically, we will explore the time delay/advance experienced by a spin-2 field propagating through a shockwave geometry and its calculation using eikonal scattering amplitudes. Demanding the absence of asymptotic time advances measurable in the effective theory constraints the possible cubic couplings that can be present. I will comment on extensions/generalizations and connections to similar constraints in curved spaces, including possible applications to cosmology.

Tuesday, February 13, 2018, 2:30 pm

Cosman Seminar Room

Center for Theoretical Physics

Building 6C, Room 6C-442

Massachusetts Institute of Technology

Refreshments at 2:00 in the same room