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Supersoft bounds and Higher Spins EFTs

Using analyticity properties of the S-matrix, I will derive a class of amplitudes’ constraints under the assumptions of a local, unitary and Lorentz-invariant theory. I will show that these bounds strongly constraint a wide class of Wilsonian Effective Field Theories also providing an upper bound on the physical cut-off. As interesting application, I will discuss their impact on massive higher-spins EFTs which turn out to be extremely weakly coupled.

Friday, Oct. 25, 2019
1:00pm
401 Physical Sciences Building