



Contribution ID: 5

Type: 3rd week (Nishinomiya-Yukawa symposium)

The dispersive approach to nonperturbative QCD

Friday, November 1, 2024 4:00 PM (30 minutes)

We propose a new analytical nonperturbative formalism, in which a dispersion relation obeyed by a correlation function is treated as an inverse problem. Given the operator product expansion of the correlation function in the deep Euclidean region as inputs, we solve for resonance properties at low energy directly from the dispersion relation. We demonstrate the power of this approach by presenting the analysis of nonperturbative QCD observables, including the rho meson mass, the glueball masses, the topological susceptibility, and the leading-twist pion distribution amplitude.

Primary author: LI, Hsiang-nan (Academia Sinica)

Presenter: LI, Hsiang-nan (Academia Sinica)

Session Classification: Nishinomiya-Yukawa workshop