

SCET Workshop 2022



Contribution ID: 36

Type: **not specified**

A NNLL Evolution Equation for Regge Amplitudes

Wednesday, 20 April 2022 11:30 (20 minutes)

The exchange of Glauber particles in SCET can be used to study QCD scattering amplitudes in the Regge limit. At NNLL level, the RGE for Regge 2-to-2 scattering amplitudes are not currently known. In this talk, I will use the tools of SCET to study the RGE structure of the three-loop Glauber exchange amplitude, which specifies these terms. SCET consistency relations between the soft and collinear sectors yield two distinct methods of fixing the RGE, each with different advantages. In the collinear sector, the organization of RGE contributions is more difficult but the calculations prove to be simpler. In the soft sector, the organization of RGE contributions is often manifest, but the calculations end up being trickier. Using results from both the soft and collinear sectors, I provide and discuss results for a new RGE equation at three-loop order in the 10 and 10-bar color channels.

Primary authors: GAO, Anjie; STEWART, Iain; RAMAN, Sanjay; RIDGWAY, Gregory (Massachusetts Institute of Technology); MOULT, Ian (Yale University)

Presenter: RAMAN, Sanjay

Session Classification: NGL and Glauber