

SCET Workshop 2022



Contribution ID: 21

Type: **not specified**

Sudakov Shoulders in Thrust and Heavy Jet Mass

Tuesday 19 April 2022 14:30 (20 minutes)

Sudakov shoulders are large logarithms of event shape observables that occur in the interior of the allowed phase space, in contrast to Sudakov peaks which occur at the boundary of phase space. Starting from a factorization theorem in SCET, we present a resummation of the Sudakov shoulder occurring in heavy jet mass and thrust near the trijet configuration (corresponding to a value of $\frac{1}{3}$). The resummation of these shoulders could be crucial to a precise extraction of the strong coupling constant from the distribution of heavy jet mass and thrust.

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Session Classification: Jets and event shapes