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von

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über

"QCD correlators at higher orders"

Abstract:
Estimating uncertainties for perturbative predictions in QCD often hinges on
our knowledge of higher-order corrections. Different approaches are available
to achieve this goal like the study of scale and scheme variations, as well as
investigating the general renormalon structure. Those approaches are exemplified
for the case of QCD two-point correlation functions. In order to study scheme variations,
it proves useful to introduce a particular scheme, the so-called C-scheme, in which the
QCD beta-function is manifestly scheme invariant and known to all orders. On the other
hand, the renormalon structure of QCD correlators can provide important insight into
the general behaviour of their perturbative series. This general behaviour also suggests
the existence of a scheme-invariant coupling in full QCD which will be introduced and its
implications discussed.

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Ort: Erwin-Schrödinger-Hörsaal, Boltzmanngasse 5, 5. Stock

gez.**:** A. Hoang, S. Plätzer, M. Procura