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## Resummation of large- $x$ and small- $x$ double logarithms in DIS and semi-inclusive $e^+e^-$ annihilation

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Recently a method has been developed to extend the resummation of large- $x$  double logarithms in inclusive DIS and semi-inclusive  $e^+e^-$  annihilation (SIA) to terms and quantities not addressed by the soft-gluon exponentiation. The  $N^{\text{nLL}}$  (leading log, next-to-leading log etc) resummation is based on  $N^{\text{nLO}}$  fixed-order results, the large- $x$  structure of DIS and SIA in dimensional regularization and the all-order factorization of mass singularities. The same formalism can be applied to the dominant  $x^{-1} \ln^{\{2n-a-n_0\}} x$  terms in SIA splitting functions and coefficient functions and the (in the flavour-singlet case) subdominant  $x^0 \ln^{\{2n-a-n_0\}} x$  contributions to (most of) their DIS counterparts. The talk addresses the theoretical basics of these resummations and presents the main numerical results which, despite all formal similarities, are qualitatively different for DIS and SIA.

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