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## Recent developments in Small- $x$ Resummation

I will discuss recent developments in the theory of small- $x$  resummation. These include the matching of resummation to fixed NNLO (and even  $N^3$ LO), the construction of a variable flavour number scheme at small  $x$ , the resummation of the heavy-flavour matching conditions, a new formalism for the resummation of physical observables, and a variety of technical improvements. All these results have been implemented in a public code, HELL, which made possible the determination of PDFs with small- $x$  resummation, showing a significantly better agreement with HERA data at low  $x$ . The impact of resummation at present and future colliders will be discussed.

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