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## Threshold parton distribution functions beyond leading power

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The soft function that appears in threshold Drell-Yan or Higgs production contains infrared divergencies. This issue can be ignored at leading power without any significant impact on computations, which allowed the achievement of high logarithmic accuracy for threshold resummation. However, if we go beyond leading power in threshold expansion, the factorization of collinear modes inside the parton distribution functions and soft modes appearing in the threshold expansion must be carefully reconsidered. By redefining the parton distribution functions, we can achieve consistent next-to-leading power factorization in the threshold, which is a prerequisite to the resummation of subleading power logarithms. I will demonstrate this procedure using the formalism of soft-collinear effective field theory and discuss how these threshold PDFs are related to standard collinear PDFs.

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