BOOST 2024 - 16th International Workshop on Boosted Object Phenomenology, Reconstruction, Measurements, and Searches at Colliders

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Towards NNLL accurate parton showers

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Parton showers are immensely flexible tools that are currently undergoing significant development in terms of their logarithmic accuracy, first to next-to-leading logarithmic (NLL) and more recently towards next-to-NLL (NNLL) accuracy. These improvements should make them significantly more powerful tools for precision collider physics, including jet substructure studies. I will present recent developments within the PanGlobal family of parton showers which result in them achieving NNLL accuracy for event shapes in final state showers. I will then discuss progress towards including triple-collinear corrections, which are part of the path to general NNLL accuracy.

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