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## HERWIRI1.031: New Approach to Parton Shower MC's in Precision QCD Theory

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By implementing the new IR-improved Dokshitzer-Gribov-Lipatov-Altarelli-Parisi-Callan-Symanzik (DGLAP-CS) kernels recently developed by one of us in the HERWIG6.5 environment we generate a new MC, HERWIRI1.0(31), for hadron-hadron scattering at high energies. We use MC data to illustrate the comparison between the parton shower generated by the standard DGLAP-CS kernels and that generated by the new IR-improved DGLAP-CS kernels. The interface to MC@NLO, MC@NLO/HERWIRI, is illustrated. Comparisons with FNAL data and some discussion of possible implications for LHC phenomenology are also presented.

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