Contribution ID: **66** Type: **Parallel Session Talk**

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

Friday, 23 July 2010 10:10 (17 minutes)

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.

Primary author: Prof. WARD, Bennie (Baylor University)

Co-authors: Dr JOSEPH, Samuel (Baylor University); Prof. YOST, Scott (The Citadel); Dr MAJHI, Swapan (Saha Institute)

Presenter: Prof. WARD, Bennie (Baylor University)

Session Classification: 03 - Perturbative QCD, Jets and Diffractive Physics

Track Classification: 03 - Perturbative QCD, Jets and Diffractive Physics