

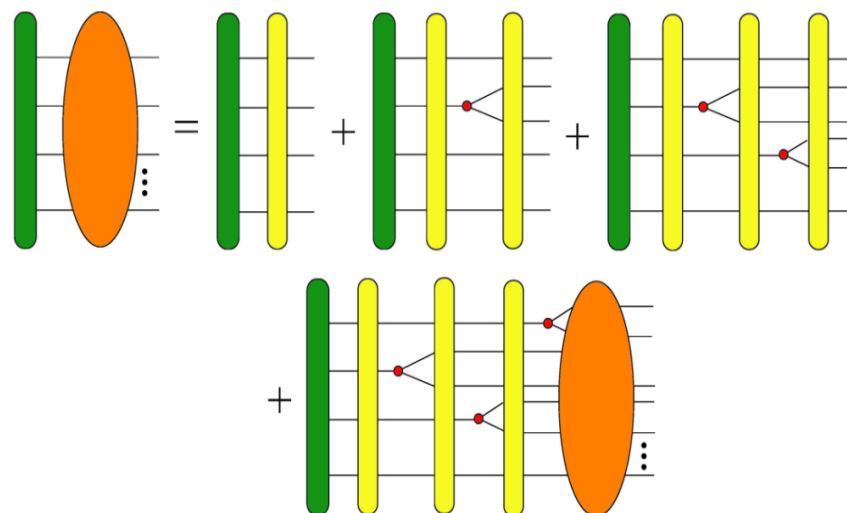
Special seminar:

Understanding parton showers.

Davison E. Soper (University of Oregon)

Thursday, 31 May 2012, 16:45 h

Building 1b, sem. room 4a/b



Parton shower event generators are essential for the planning and interpretation of the LHC experiments. Some of the key physics ideas that form the basis for the event generators were formulated in the 1970s, while the basic structure of current event generators was created in the 1980s. Among the physics inputs are jet structure, factorization, and quantum coherence. Additionally, there are analytic formulas that sum the large logarithms that arise in certain measurements and there is some relation of these analytic formulas with the structure of event generators.

Current event generators do a great job, but after thirty years there is still much to be done to improve them. The current research frontier includes finding better ways to match shower generation to exact leading order matrix elements and exact next-to-leading order matrix elements and it includes doing a better job with the treatment of spin and color. This is the aim of the current DESY workshop “Event Generators and Resummation”.

- Coffee, tea and cookies will be served at 16.15h
- After the seminar there is a chance for private discussions with the speaker over wine and pretzels