

WG5: Monte Carlo Tools

Summary Report

- Goals
- Talks
- Outcome

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Goals

- Applications of HERA MC tools for LHC analyses
- Further development of HERA MC tools for usage at LHC
- Possible tuning of MC generators

Talks

- Michelangelo Mangano Summary from the MC4LHC Workshop
- Dimitri Burilkov Interface for using LHAPDF in PYTHIA and HERWIG
- Peter Richardson HERWIG
- Klaus Rabbertz NLOLIB
- Hannes Jung CASCADE
- Hannes Jung RAPGAP
- Ben Waugh JetWeb, CEDAR, HzTool
- Giuseppe Iacobucci Study of DIS events containing a leading proton in ep collisions at HERA
- Alexandre Nikitenko PYTHIA vs LO/NLO prediction for b quark spectra in $gg \rightarrow bbh$ production
- Giovanna Davatz Effective K factors for $gg \rightarrow WW \rightarrow 2l$ at the LHC
- Paolo Bartalini LCG Generator project

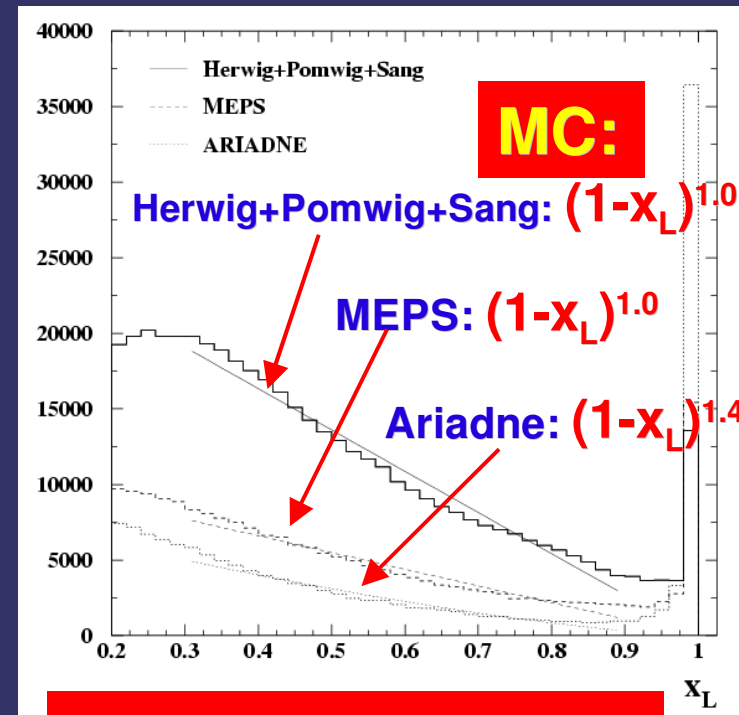
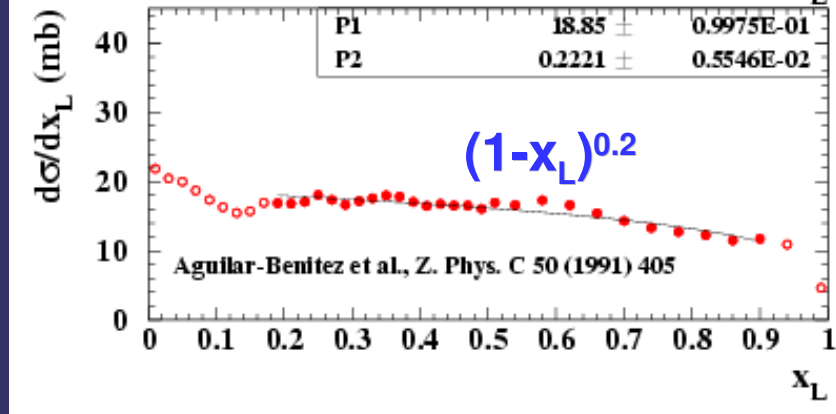
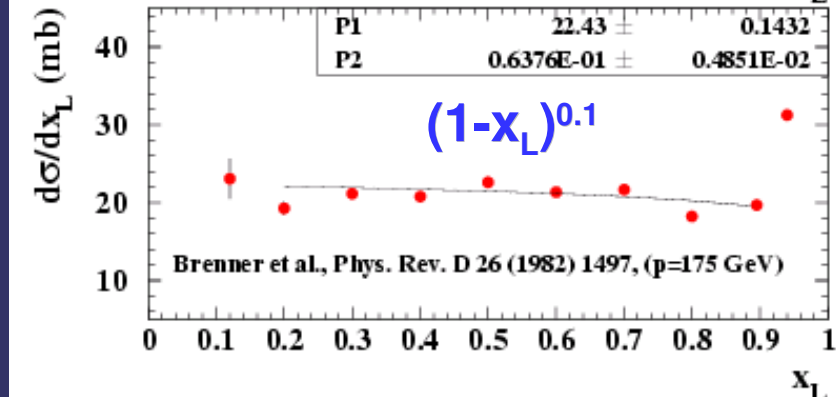
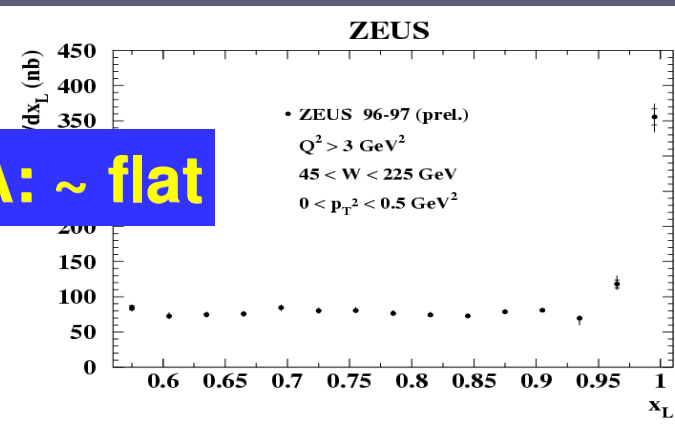
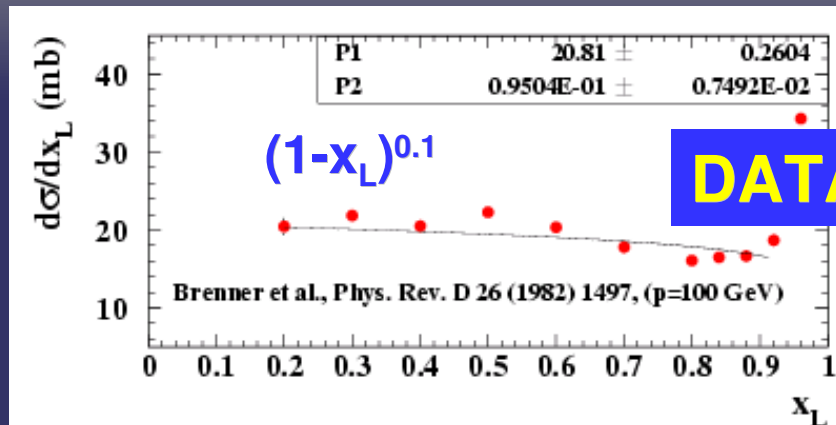
Questions/Topics

- Possible checks of minimum bias models with HERA data. Comparison to Tevatron?
- Modelling leading proton in MC
- Possible checks of photon radiation from proton side at HERA (PDF uncertainty)
- Include H1 and ZEUS PDF fits into LHAPDF

Topics (cont'd)

- Include NLO pp programs into NLOLIB
- In case MC@NLO is made available for HERA during this Workshop, check it
- Further development of CASCADE (multiple interactions, ...), tests in LHC expts

x_L distribution: DATA vs. MC



⇒ quite different!