

QCD Agenda 11/15/02

1. News/Announcements Jay/Joey 5'

Run 2

2. Review of jet subgroup meeting Jay/Joey 10'

Run 1

3. Update on W/Z->jet jet Olga Lobban 45'

Special topic

4. Discussion of b-jet and B-hadron cross sections
Michelangelo Mangano 30'

Paper of the Week

[hep-ph/0211080](#); Uncertainties of predictions from parton distributions. I: experimental errors; MRST crew; We determine the uncertainties on observables arising from the errors on the experimental data that are fitted in the global MRST2001 parton analysis. By diagonalizing the error matrix we produce sets of partons suitable for use within the framework of linear propagation of errors, which is the most convenient method for calculating the uncertainties. Despite the potential imitations of this approach we find that it can be made to work well in practice. This is confirmed by our alternative approach of using the more rigorous Lagrange multiplier method to determine the errors on physical quantities directly. As particular examples we determine the uncertainties on the predictions of the charged-current deep-inelastic structure functions, on the cross-sections for W production and for Higgs boson production via gluon-gluon fusion at the Tevatron and the LHC, on the ratio of W-minus to W-plus production at the LHC and on the moments of the non-singlet quark distributions. We discuss the corresponding uncertainties on the parton distributions in the relevant x, Q^2 domains. Finally, we briefly look at uncertainties related to the fit procedure, stressing their importance and using σ_W , σ_H and extractions of $\alpha_S(M_Z^2)$ as examples. As a by-product of this last point we present a slightly updated set of parton distributions, MRST2002.

Jet Subgroup?

- There are a number of jet-related QCD analyses either underway or soon-to-be underway
 - inclusive jet cross section
 - dijet mass/angular distribution
 - b jet fragmentation/ b jet cross section
 - energy flow/jet shapes
 - k_T jet cross section
- Jay and I have been discussing the possibility/need of forming a specific jet sub-group as a forum for the people involved in the above analyses to work together/have more time for discussion than is available in either the qcd meeting itself or in the jet corrections meeting
- Most of work taking place now is at the level of jet corrections (cross-group effort, see list), but there has to be a specific focus on jet physics to prepare at least some of the above topics for the Winter conferences
- Of course, there will still be a great deal of discussion at the qcd meetings
- The first meeting of this group took place yesterday with about 15 people attending. There were discussions of the activities people were currently involved in and the physics topics they were interested in pursuing. Jay and Joey are currently searching for a meeting room and time. There is the possibility of having a meeting every week.

STNTUPLE discussion

At the jet meeting, Giuseppe presented a discussion on the use of a standard ntuple for jet analyses, including JetClu, mid-point and k_T jets. A proposal will be presented at the next QCD meeting.

CDF/D0 jet meeting

There will be a joint CDF/D0/theory jet meeting on Monday Dec. 16 from 9 AM-3 PM in One-West. We will take advantage of the presence that week of Zoltan Nagy to discuss evaluations of k_T jet cross sections. In addition, we will finalize the changes to the mid-point jet algorithm and discuss the implications of these changes (led by Steve Ellis). The meeting will also be carried by live-streaming.

Off-week QCD meeting

Friday Nov. 22 in the Theater from
8:30-10:00 AM

Igor Gorelov will present the
blessing talk for the 3-jet analysis