
Endnotes

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- ...first a preview of what Walter would have said if he were here

Effective use of pdf uncertainties

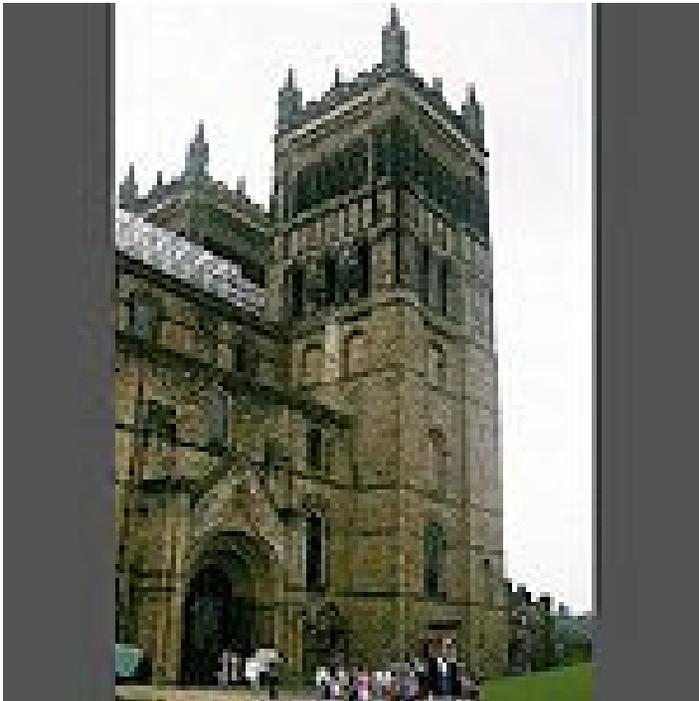
- PDF uncertainties are important both for precision measurements (W/Z cross sections) as well as for studies of potential new physics (a la jet cross sections at high E_T)
- Most Monte Carlo/matrix element programs have “central” pdf’s built in, or can easily interface to PDFLIB
- Determining the pdf uncertainty for a particular cross section/distribution might require the use of many pdf’s
 - ◆ CTEQ Hessian pdf errors require using 40 pdf’s
 - ◆ GKK on the order of 100
 - ◆ **New: MRST2002->30 pdfs**
- Too clumsy to attempt to include grids for calculation of all of these pdf’s with the MC programs
- **->Les Houches accord #2**
 - ◆ Each pdf can be specified by a few lines of information, if MC programs can perform the evolution
 - ◆ Fast evolution routine will be included in new releases to construct grids for each pdf

Les Houches accord #2->LHAPDF

- Using the interface is as easy as using PDFLIB (and much easier to update)
 - ◆ PDFLIB will never have new PDF's; some alternative is needed
- First version has CTEQ6M, CTEQ6L, all of CTEQ6 error pdfs and MRST2001 pdfs
- **See pdf.fnal.gov**
- call `InitiPDFset(name)`
 - ◆ called once at the beginning of the code; *name* is the file name of external PDF file that defines PDF set
- call `InitPDF(mem)`
 - ◆ *mem* specifies individual member of pdf set
- call `evolvePDF(x, Q, f)`
 - ◆ returns pdf momentum densities for flavor *f* at momentum fraction *x* and scale *Q*

Workshop at Durham

The IPPP has now moved into the new Ogden Centre for Fundamental Physics building!



- Matrix Element and Parton Showering Monte Carlos

- ◆ Week of Jan. 15-17, 2003



University of Durham

Next meeting in Fermilab in March

- between La Thuile and Moriond?
- ...in conjunction with CTEQ
 - ◆ so more emphasis on physics
 - ◆ maybe 2 days instead of 1