

Work Status



- **ZDC**
 - Find a bug (this week)
 - Redo : compare LYSO and PbWO4 (this week)
 - Test LYSO/PbWO4 with different length (this week)
 - Test LYSO/PbWO4 with different size (to do)
- **RPC**
 - **FEE preparation for July beam test (July 10th to July 17th)**
 - Old Amp E88 (wait for production)
 - Old Dis for E88 (done)
 - *New Dis. * 5 (undergoing, Chu)*
 - *New Amp * 5 (undergoing, Chu)*
 - *New Amp + Dis * 5 (undergoing, Chu)*
 - SHIP strip PCB (undergoing, 佩蓉)
 - Thicker PCB for next version carbonless(undergoing, Chu)
 - AC power board * 1 (2nd priority)
 - HV board w/ current monitoring (2nd priority, after July)
 - **Write control program for discriminator**
 - Set threshold channel by channel(to do)
 - **CR test @ AS**
 - Open 2nd RPC (to do)
- **DY analysis :**
 - **Test code (undergoing)**
- **MCFM + xFitter**
 - Understand grid file(this week)

Using Grid File (one PDF)

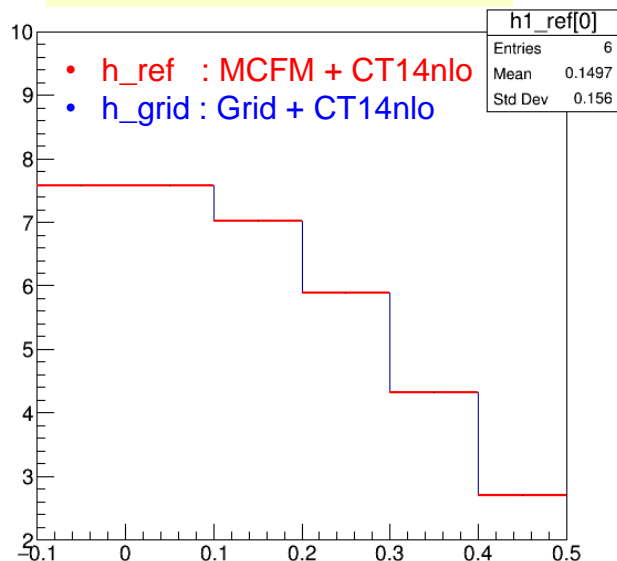
- Setting
- Original MCFM (w/o pion modification)
- only one PDF can be set (*2)

APPL code Example :

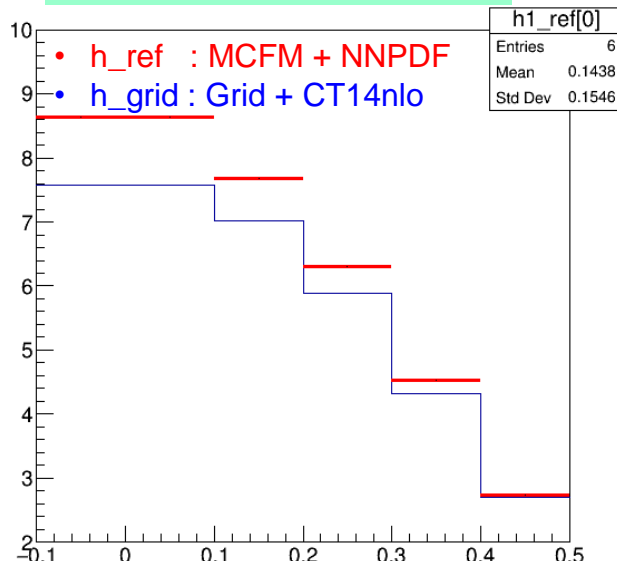
<https://indico.desy.de/event/6225/contributions/77780/attachments/51737/63186/pdfworkshop-applgrid-tutorial.pdf>

- (1) Test CT14nlo
 - (2) Test NNPDF30_nnlo_as_0115
- Cross section histogram (*2)
- (1) Reference histogram (red)
 - (2) Draw cross section w/ grid file + PDF setting = CT14nlo (blue)

(1) MCFM w/ CT14nlo



(2) MCFM w/ NNPDF



- (1) Does PDF setting in Input.DAT affect the generated grid file? **NO**
- (2) Can we reproduce reference histogram? Yes, only with one PDF input is no problem
- (3) To do : need to check how to use grid file w/ two PDF inputs.

Using Grid File (2 PDFs)

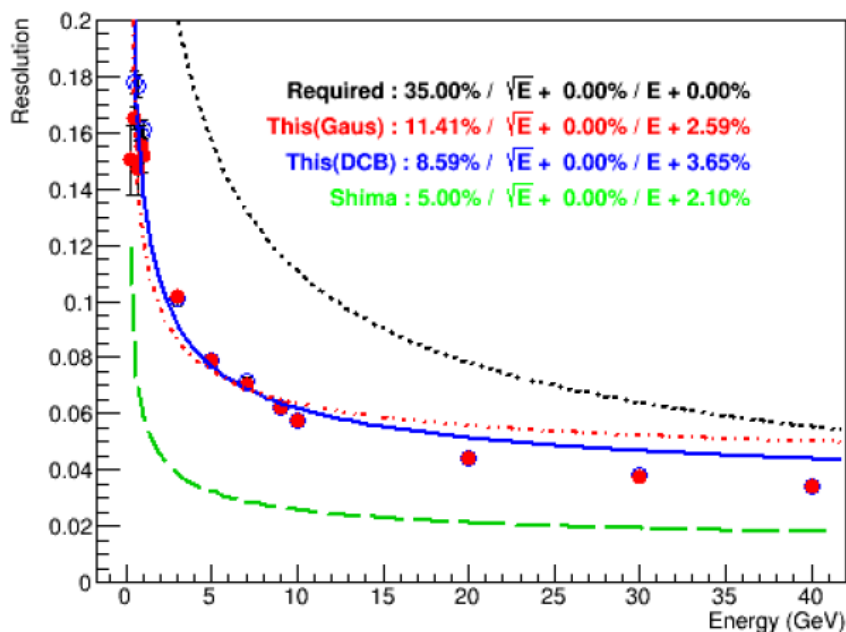


- Modify LHAPDF function
- ...

ZDC MC Simulation

- Made a mistake last week, no need to recompile after modifying .xml file!
- Compare LYSO and PbWO4
 - DCB fitting is better (blue line)
 - Results of PbWO4 is better

LYSO



PbWO4

