ALICE experience and suggestions

- The following procedure is in place in ALICE since ~1yr for the submission of numerical results to HEPData
  → note: the procedure is mandatory for all ALICE papers

- Prior to submission to arXiv
  - The Paper Committee (PC)
    - prepares the .input HEPData file
    - tests it on http://hepdata.cedar.ac.uk/resource-cgi/input
  - The Internal Review Committee validates the file

- The paper is submitted to arXiv and to the journal
- …
- The paper is accepted by the journal

- The ALICE webmaster
  - registers the paper in the Durham web using its INSPIRE ID
  - sends the password to the PC
- The PC chair
  - logs to the system
  - processes the record
  - flags it as "Ready"
- The ALICE webmaster
  - adds the record to the Durham's public DB

ALICE experience and suggestions

- In the course of 2015, 38 papers have been submitted by ALICE
- The procedure outlined in the previous slide has successfully been followed (with minor problems on the user side) for all of these papers (completed only for accepted papers!)
- We currently have a "gray" period between arXiv submission and acceptance by the journal, where
  - HEPData record is still not public
  - Results are relatively "safe" for dissemination (theorists, other coll.), in our experience the journal review step seldom brings to significant modifications
- Availability of versioning would "solve" this issue and allow distribution of numerical values already at arXiv submission time

ALICE experience and suggestions

- One issue was recently pointed out in a discussion internal to the Collaboration on differences in the representation of uncertainties in the ROOT file and in the data table

http://hepdata.cedar.ac.uk/view/ins1343112/d2
http://hepdata.cedar.ac.uk/view/ins1343112/d2/root

Additional systematic error: ± 8.0% (total inelastic cross section uncertainty)

ABS(ETA)	**0.0-0.5**
R	**0.2**
RE	**P P --> JET(S) X**
SQRT(S)	**2760.0 GeV**

PT IN GEV/C	D2N/DPT/DETA/NEVT IN 1/(GEV/C)
30.0 – 40.0	1.6e-6 ± 4.79e-8 (stat) ± 7.77e-8 (sys,uncorr)
40.0 – 50.0	4.78e-7 ± 2.42e-8 (stat) ± 2.4e-8 (sys,uncorr)
50.0 – 60.0	1.91e-7 ± 1.52e-8 (stat) ± 9.46e-9 (sys,uncorr)
60.0 – 70.0	9.64e-8 ± 1.09e-8 (stat) ± 4.8e-9 (sys,uncorr)
70.0 – 80.0	4.49e-8 ± 7.49e-9 (stat) ± 2.48e-9 (sys,uncorr)
80.0 – 90.0	2.33e-8 ± 5.5e-9 (stat) ± 1.57e-9 (sys,uncorr)
90.0 – 100.0	1.49e-8 ± 4.49e-9 (stat) ± 1.04e-9 (sys,uncorr)
100.0 – 110.0	7.19e-9 ± 3.21e-9 (stat) ± 6.42e-10 (sys,uncorr)
110.0 – 120.0	3.02e-9 ± 2.13e-9 (stat) ± 3.64e-10 (sys,uncorr)

Plot
SelectPlot

```
  gROOT->SetStyle("Plain");

  // Plot: p8845_d2x1y1
  double p8845_d2x1y1_xval[] = { 35.0, 45.0, 55.0, 65.0, 75.0, 85.0, 95.0, 105.0, 115.0 };
  double p8845_d2x1y1_xerrminus[] = { 5.0, 5.0, 5.0, 5.0, 5.0, 5.0, 5.0, 5.0, 5.0 };
  double p8845_d2x1y1_xerrplus[] = { 5.0, 5.0, 5.0, 5.0, 5.0, 5.0, 5.0, 5.0, 5.0 };
  double p8845_d2x1y1_yval[] = { 1.6E-6, 4.78E-7, 1.91E-7, 9.64E-8, 4.49E-8, 2.33E-8,
1.49E-8, 7.19E-9, 3.02E-9 };
  double p8845_d2x1y1_yerrminus[] = { 9.127814634401818E-8, 3.4082840257232084E-8,
1.7903396325837172E-8, 1.1910079764636339E-8, 7.889898605178659E-9, 5.719694047761645E-9,
4.6088718793214465E-9, 3.2735705277265677E-9, 2.1608785250448485E-9 };
  double p8845_d2x1y1_yerrplus[] = { 9.127814634401818E-8, 3.4082840257232084E-8,
1.7903396325837172E-8, 1.1910079764636339E-8, 7.889898605178659E-9, 5.719694047761645E-9,
4.6088718793214465E-9, 3.2735705277265677E-9, 2.1608785250448485E-9 };
  double p8845_d2x1y1_ystatminus[] = { 4.79E-8, 2.42E-8, 1.52E-8, 1.09E-8, 7.49E-9,
5.5E-9, 4.49E-9, 3.21E-9, 2.13E-9 };
  double p8845_d2x1y1_ystatplus[] = { 4.79E-8, 2.42E-8, 1.52E-8, 1.09E-8, 7.49E-9,
5.5E-9, 4.49E-9, 3.21E-9, 2.13E-9 };
  int p8845_d2x1y1_numpoints = 9;
  p8845_d2x1y1 = TGraphAsymmErrors(p8845_d2x1y1_numpoints, p8845_d2x1y1_xval,
p8845_d2x1y1_yval, p8845_d2x1y1_xerrminus, p8845_d2x1y1_xerrplus, p8845_d2x1y1_yerrminus,
p8845_d2x1y1_yerrplus);
  p8845_d2x1y1.SetName("/HepData/8845/d2x1y1");
  p8845_d2x1y1.SetTitle("/HepData/8845/d2x1y1");
  p8845_d2x1y1.Draw("AP");
```

Data table gives
→ Statistical error
→ Systematic error

ROOT file gives
→ Statistical error
→ Quadratic sum of stat. + syst.

May lead to misunderstanding….