

FINAL 2003 Polarization

rescaling factor

BLUE

comparison offline / online × 1.09

recalibration × 1.23

overall $P_{\text{final}} = P_{\text{online}} \times 1.34$

YELLOW

comparison offline / online × 1.05

recalibration × 1.21

overall $P_{\text{final}} = P_{\text{online}} \times 1.27$

no bunch selections implemented

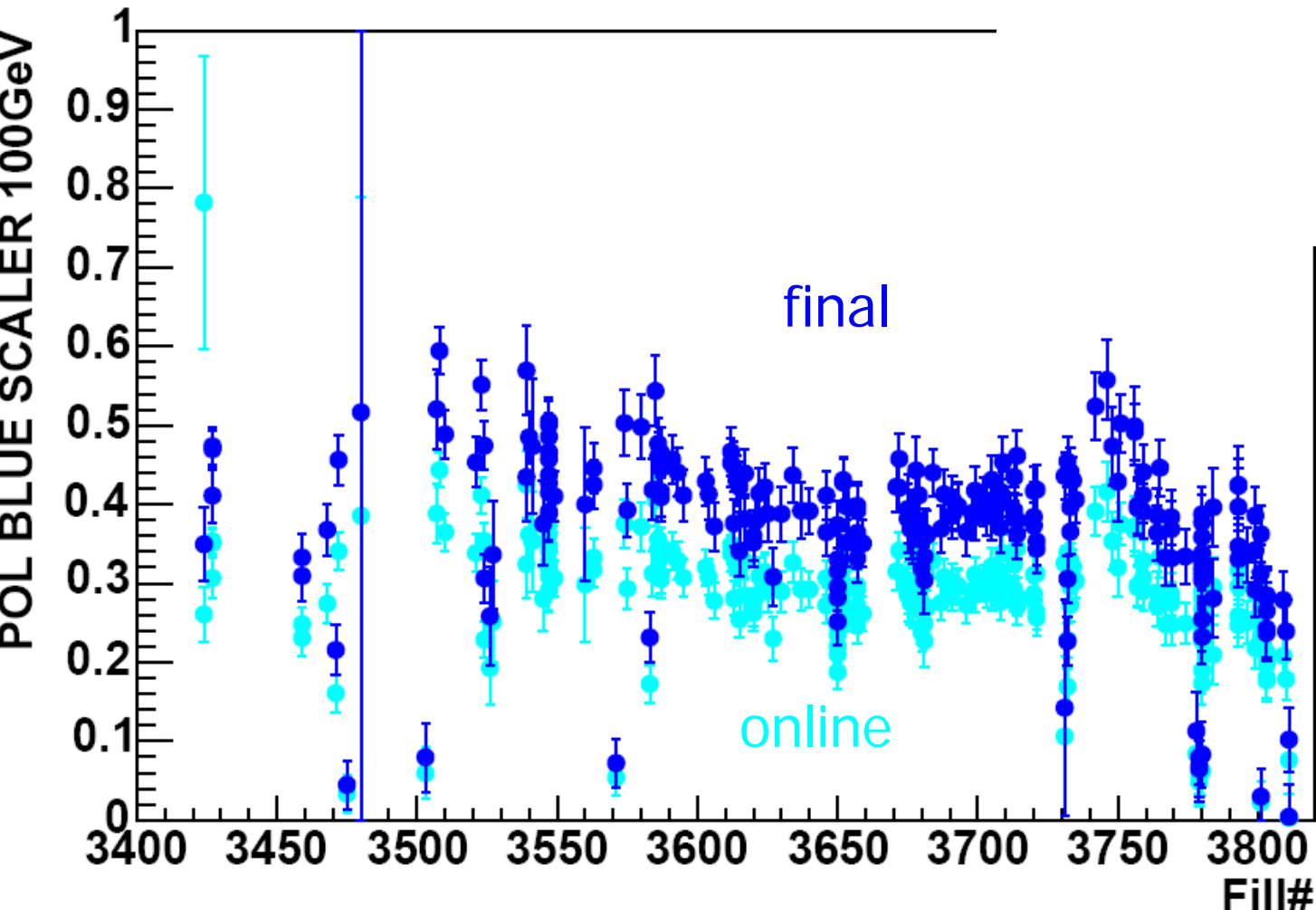
STAR and PHENIX use different bunch selections and can have different factors

Final 2003 Blue Polarization @ 100 GeV

reanalysis of online data \uparrow 9.0%
 A_N renormalization \uparrow 23.0%

\Rightarrow rescale by 1.34

systematic error 19%

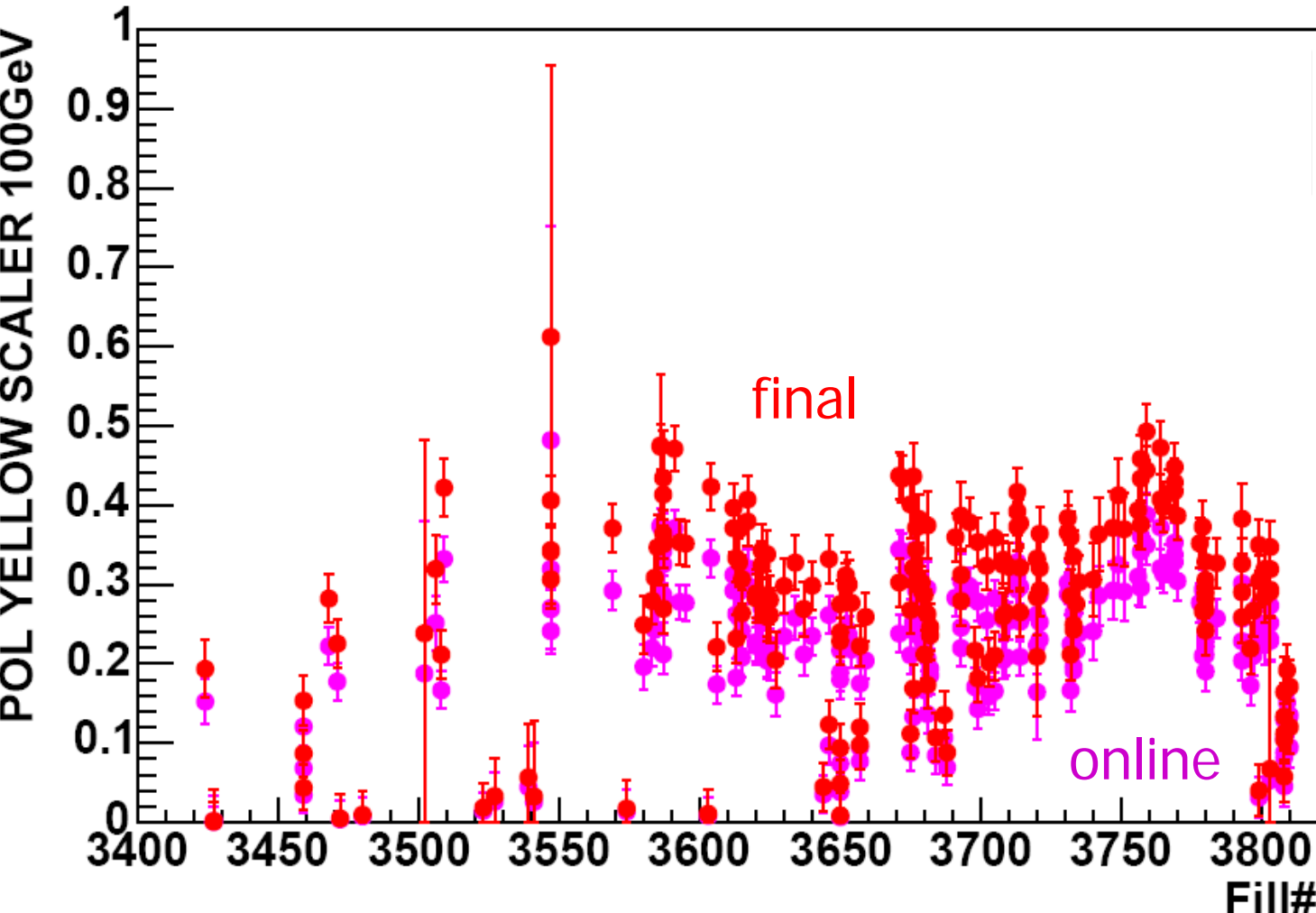


Final 2003 Yellow Polarization @ 100 GeV

reanalysis of online data $\uparrow\uparrow$ 5.0%
 A_N renormalization $\uparrow\uparrow$ 21.0%

\Rightarrow rescale by 1.27

systematic error 17%



FINAL 2004 Polarization

rescaling factor

BLUE

fill # ≤ 5234

$$P_{\text{final}} = P_{\text{online}} \times 1.25$$

fill # ≥ 5235

$$P_{\text{final}} = P_{\text{online}} \times 1.08$$

YELLOW

fill # ≤ 5234

$$P_{\text{final}} = P_{\text{online}} \times 1.21$$

fill # ≥ 5235

$$P_{\text{final}} = P_{\text{online}} \times 1.11$$

from comparison offline / online & recalibration

no bunch selection implemented

Final P_{BEAM} from JET 2004

tot sys = 0.016

all 90 runs

$$P_{\text{BEAM}} = 0.392 \pm 0.021 \text{ (stat)} \pm 0.008 \text{ } (\Delta P_{\text{TARGET}}) \pm 0.014 \text{ (sys)} = 0.392 \pm 0.026$$

$$\Delta P_{\text{BEAM}} / P_{\text{BEAM}} = 6.6 \%$$

43 runs – carbon polarimeter run in event mode

$$P_{\text{BEAM}} = 0.386 \pm 0.029 \text{ (stat)} \pm 0.008 \text{ } (\Delta P_{\text{TARGET}}) \pm 0.014 \text{ (sys)} = 0.386 \pm 0.033$$

$$\Delta P_{\text{BEAM}} / P_{\text{BEAM}} = 8.5 \%$$

Errors: JET Calibration

jet normalization	8.5 %
energy scale	9.8 %
event selection	3.0 %
sys. of measurement	0.0 %
channel by channel; no polarization profile negligible compared to statistical errors	
TOTAL:	13.3 %

Errors 2003

	Blue	Yellow
jet calibration	13.3 %	13.3 %
offline / online	7.3 %	9.2 %
energy correction	0.0 %	0.0 %
same method as 2004		
event selection	4.0 %	2.0 %
sys. of measurement	10.0 %	4.0 %
channel by channel; no polarization profile		
TOTAL:	18.6 %	16.8 %

Errors 2004

Blue

Yellow

jet calibration

9.0 %

13.3 %

energy correction not included for Blue

offline / online

7.4 %

9.3 %

most measurements were "scaler" mode during physics run

energy correction

0.0 %

0.0 %

same method as "calibration"

event selection

3.0 %

3.3 %

sys. of measurement

0.0 %

0.0 %

channel by channel; no polarization profile
negligible compared to statistical errors

TOTAL:

12.0 %

16.6 %