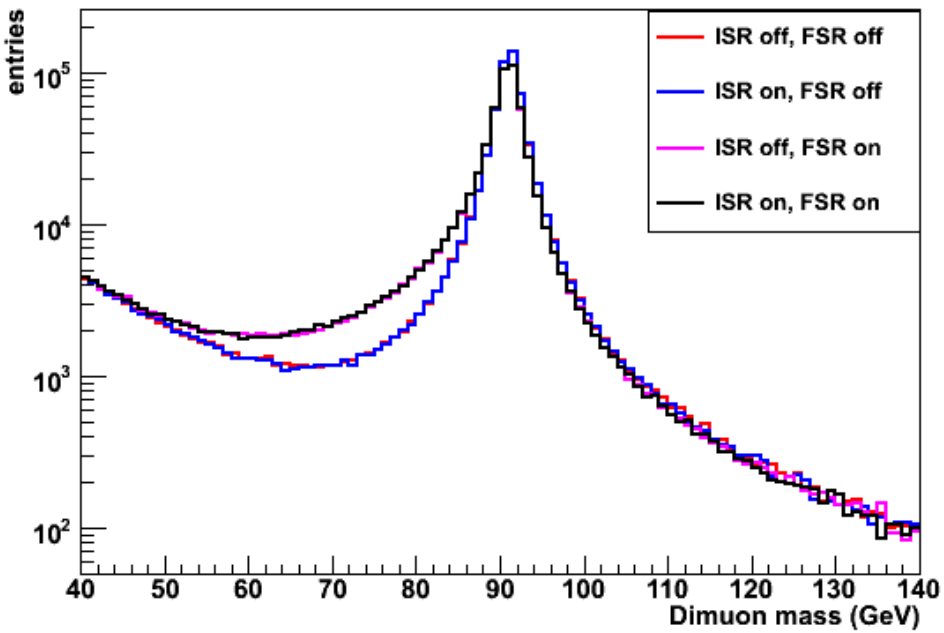
W/Z Meeting

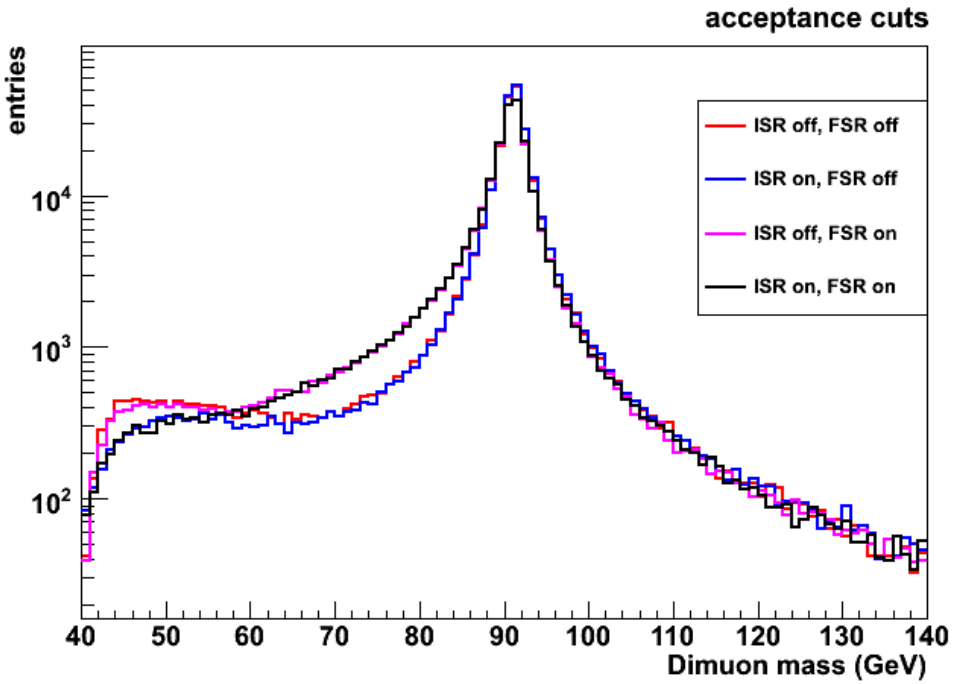
Impact of ISR and FSR in the Z F/B Asymmetry

02/18/2010

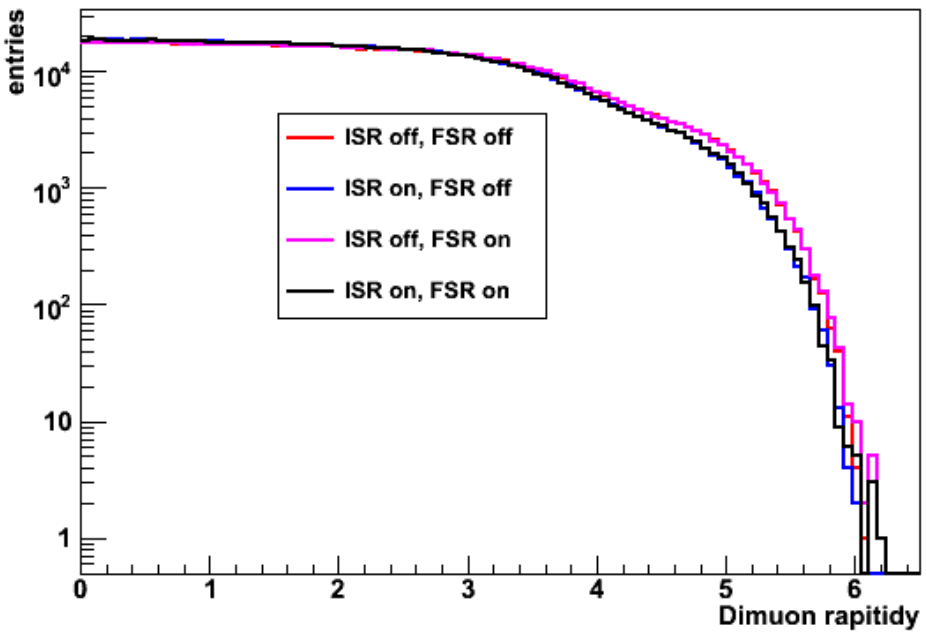
Renata Rodrigues

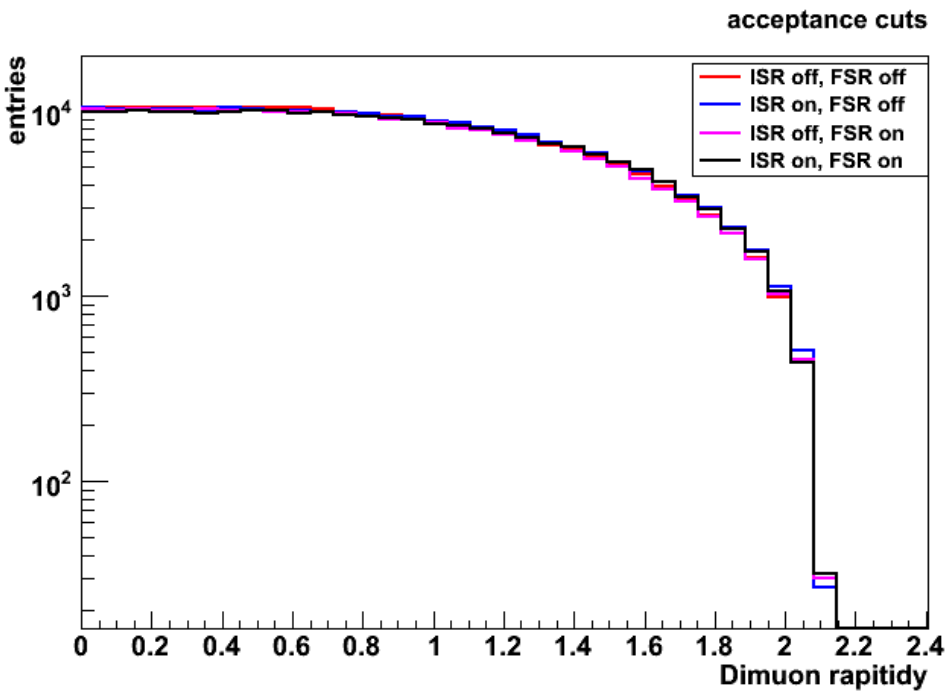
Dimuon mass


entries
ISR off, FSR off
ISR on, FSR off
ISR off, FSR on
ISR on, FSR on
Dimuon mass (GeV)

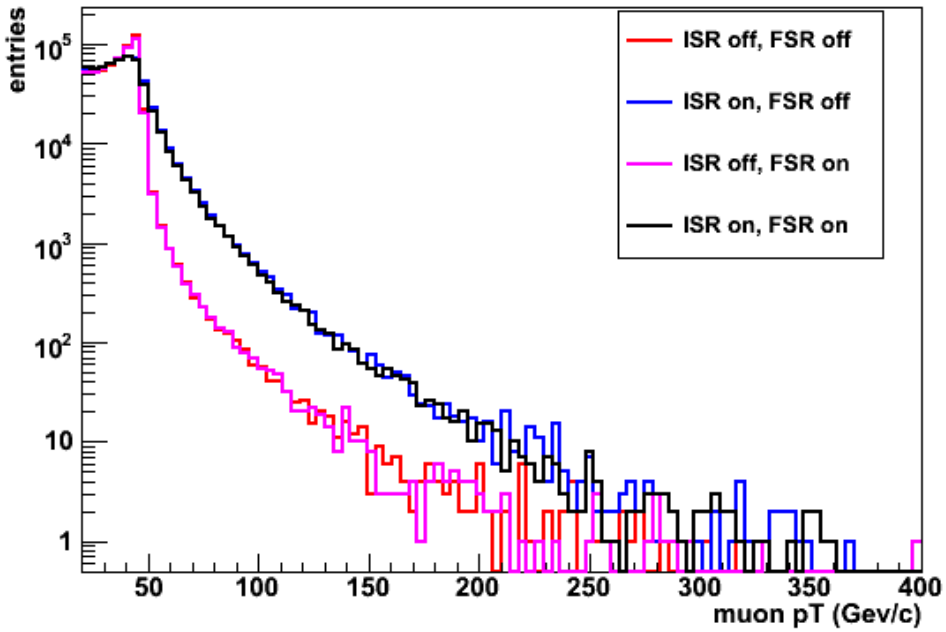

acceptance cuts
entries
ISR off, FSR off
ISR on, FSR off
ISR off, FSR on
ISR on, FSR on
Dimuon mass (GeV)

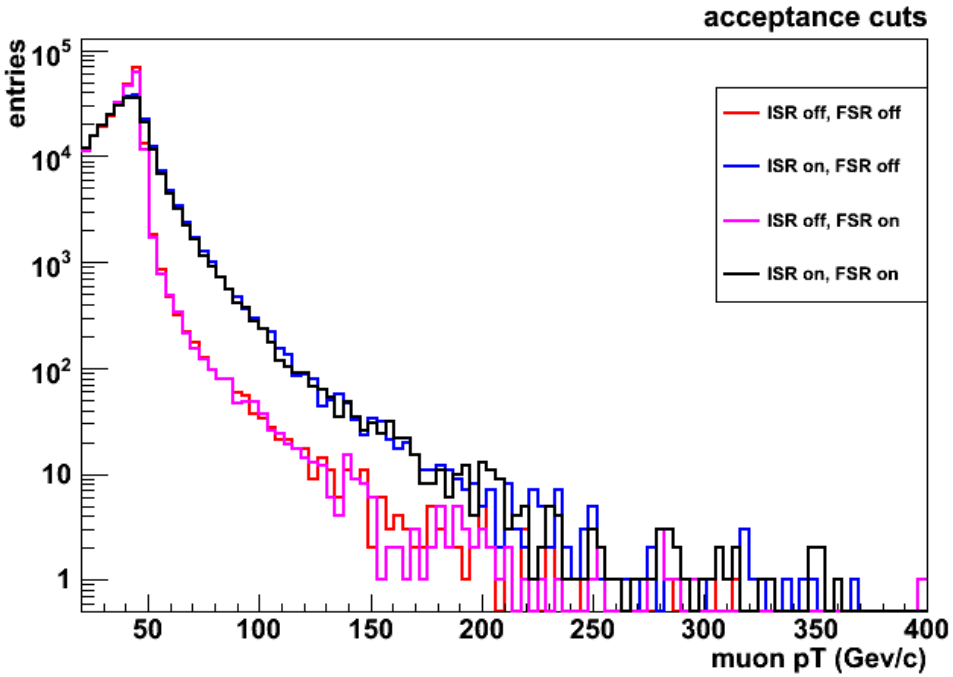
Dimuon rapidity



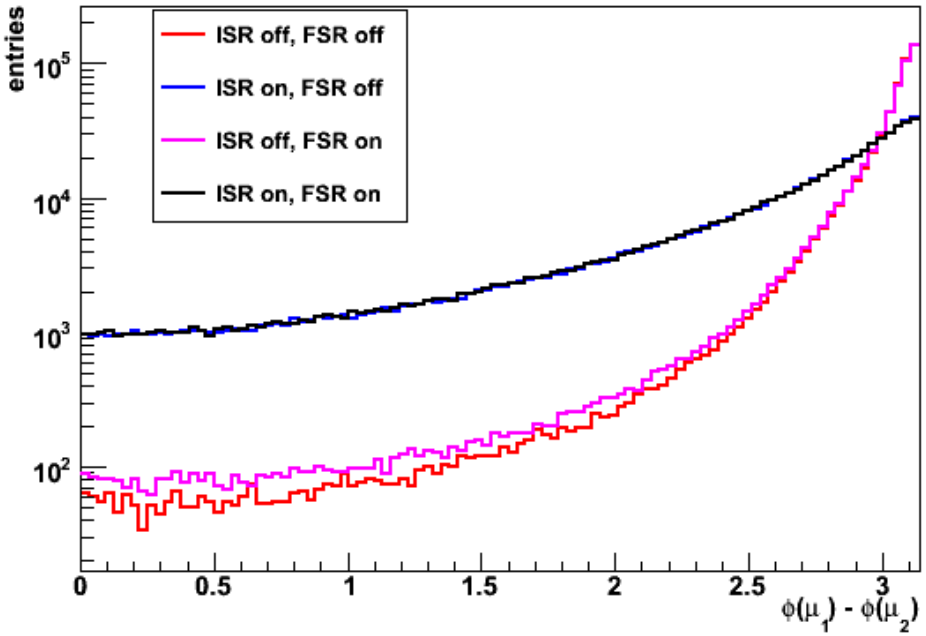


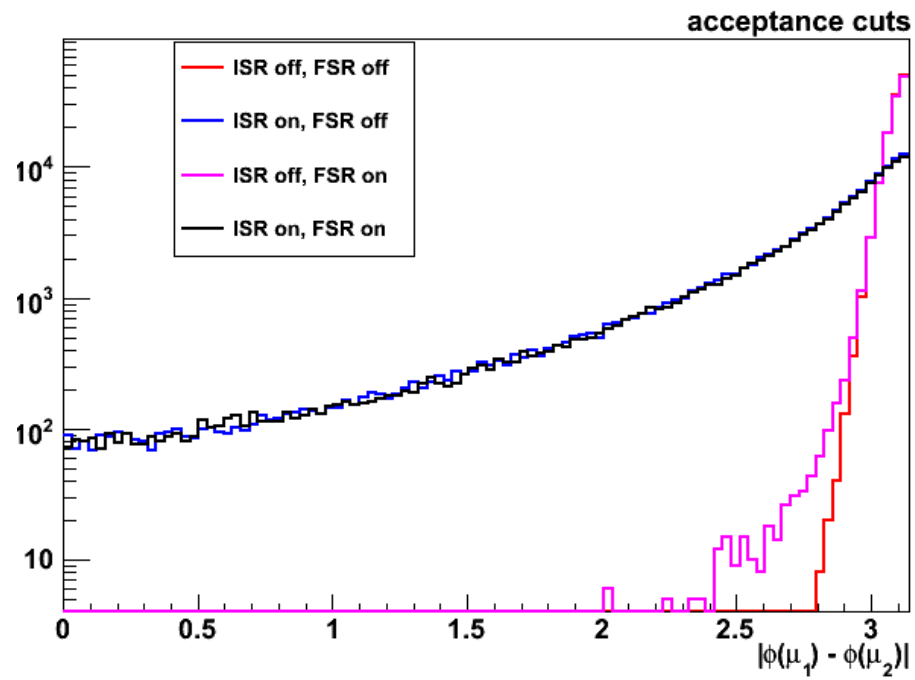
Transverse momentum



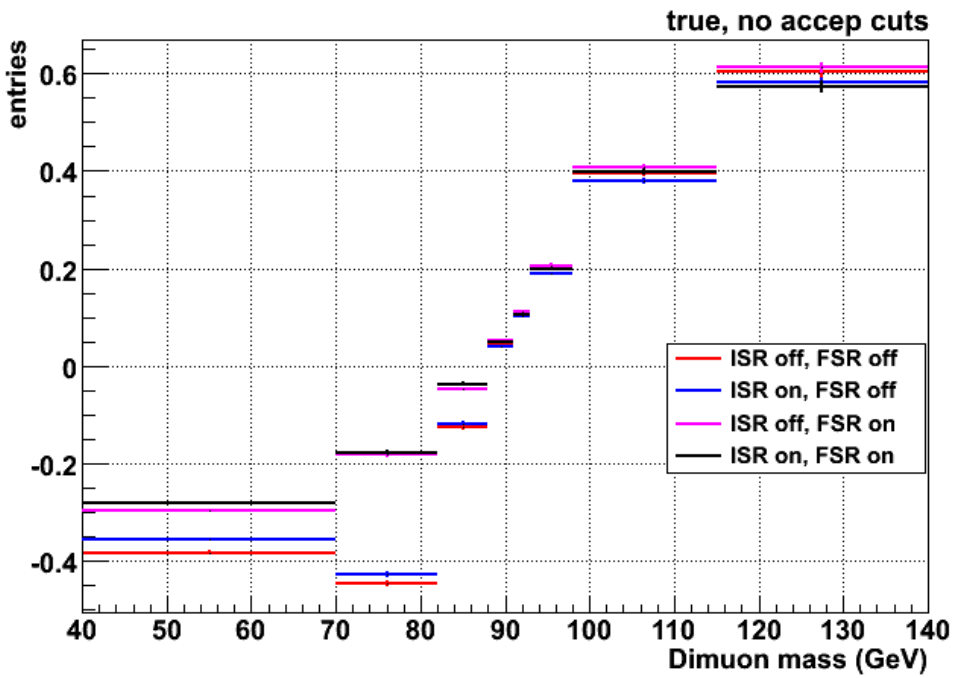


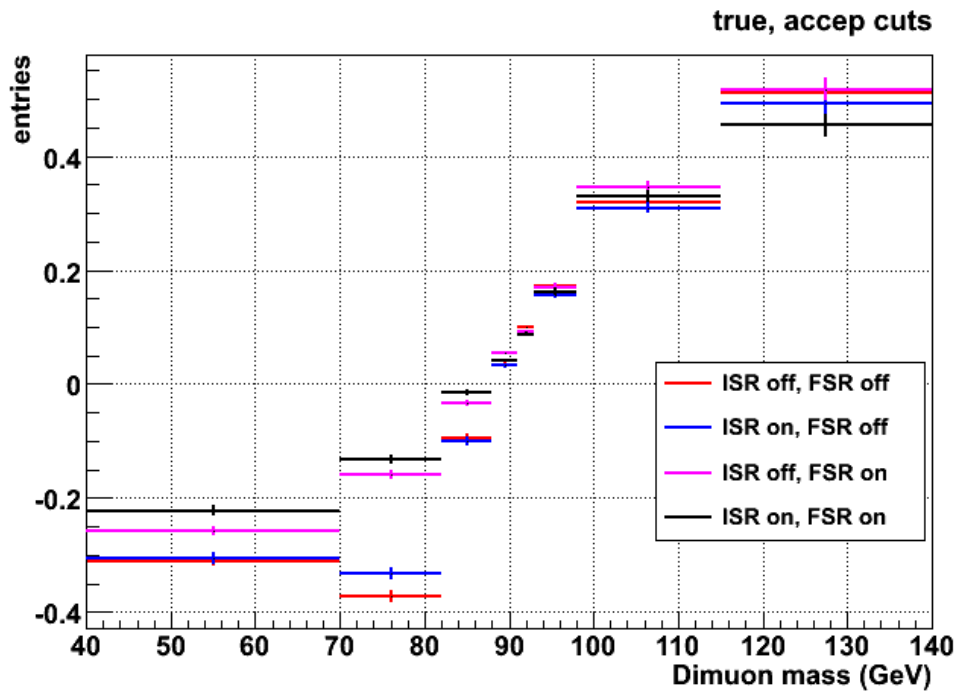
Delta phi


entries
ISR off, FSR off
ISR on, FSR off
ISR off, FSR on
ISR on, FSR on
10^5
10^4
10^3
10^2
0
0.5
1
1.5
2
2.5
3
$\phi(\mu_1) - \phi(\mu_2)$

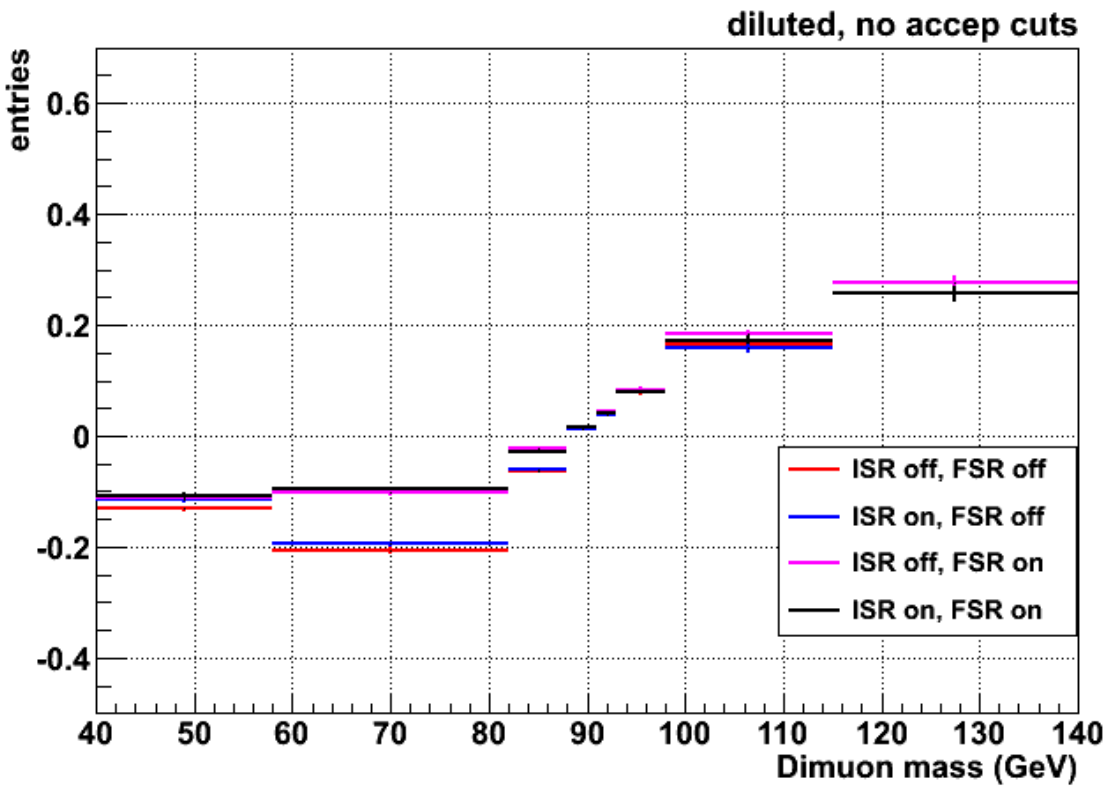

acceptance cuts
ISR off, FSR off
ISR on, FSR off
ISR off, FSR on
ISR on, FSR on
10^4
10^3
10^2
10
0
0.5
1
1.5
2
2.5
3
$|\phi(\mu_1) - \phi(\mu_2)|$

F/B Asymmetry





F/B Asymmetry

$M_{\mu\mu}$ range (GeV)	Afb (ISR off, FSR off)	Afb (ISR off, FSR on)	Afb (ISR on, FSR off)	Afb (ISR on, FSR on)
40-70	-0.325 +/- 0.004	-0.303 +/- 0.004	-0.283 +/- 0.004	-0.273 +/- 0.004
70-82	-0.495 +/- 0.005	-0.469 +/- 0.005	-0.234 +/- 0.004	-0.222 +/- 0.004
82-88	-0.127 +/- 0.005	-0.118 +/- 0.005	-0.0478 +/- 0.0037	-0.0371 +/- 0.0037
88-91	0.0424 +/- 0.0022	0.041 +/- 0.002	0.0531 +/- 0.0023	0.0504 +/- 0.0023
91-93	0.110 +/- 0.002	0.103 +/- 0.002	0.111 +/- 0.002	0.104 +/- 0.002
93-98	0.203 +/- 0.004	0.190 +/- 0.004	0.206 +/- 0.004	0.199 +/- 0.004
98-115	0.394 +/- 0.006	0.381 +/- 0.006	0.408 +/- 0.006	0.397 +/- 0.006
115-140	0.603 +/- 0.011	0.581 +/- 0.012	0.612 +/- 0.012	0.572 +/- 0.012

Diluted Asymmetry