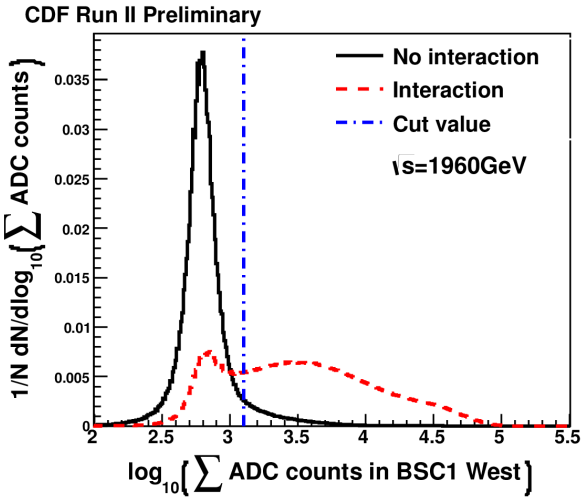
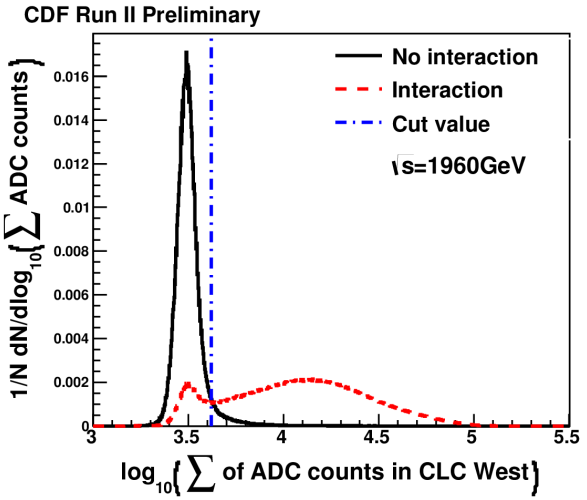
GXG meeting – blessing plots

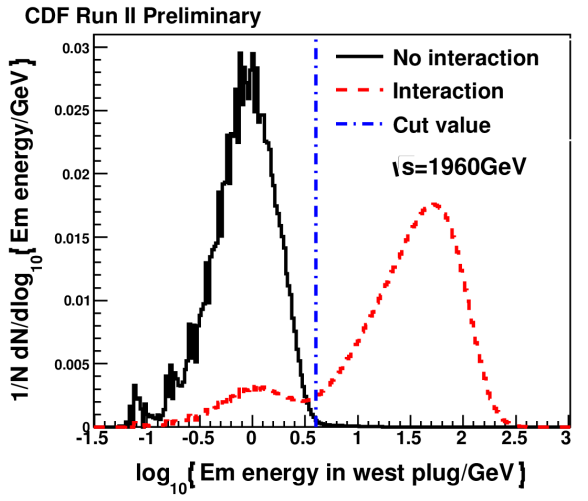
Maria Żurek
Artur Święch

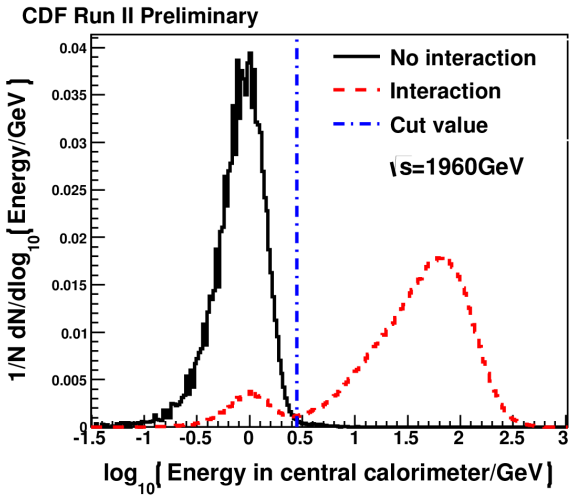
24.08.2012

Fwd. & exclusivity cuts

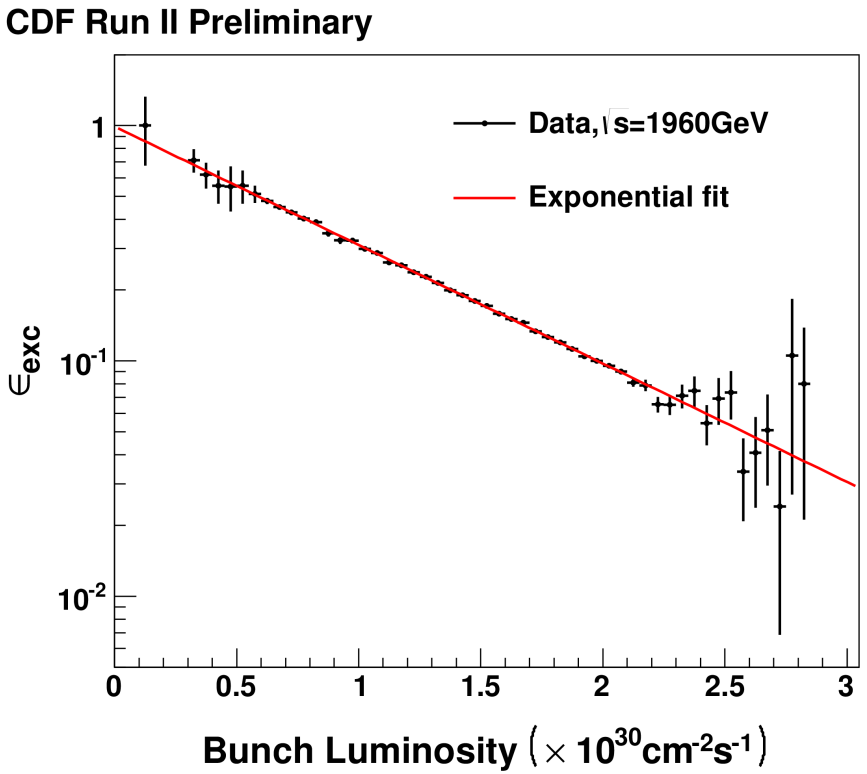


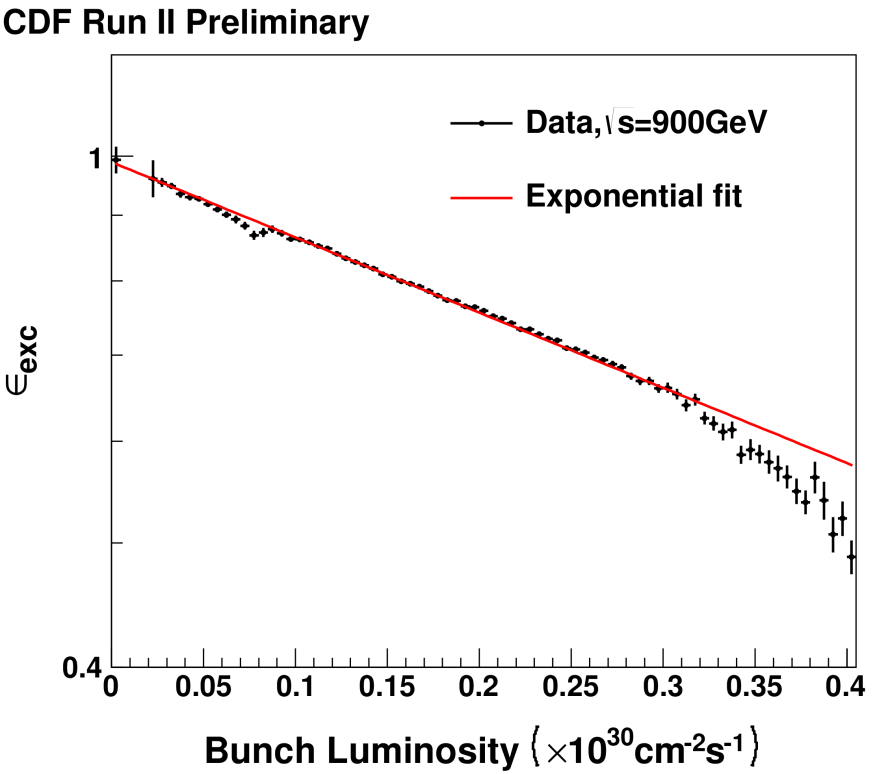




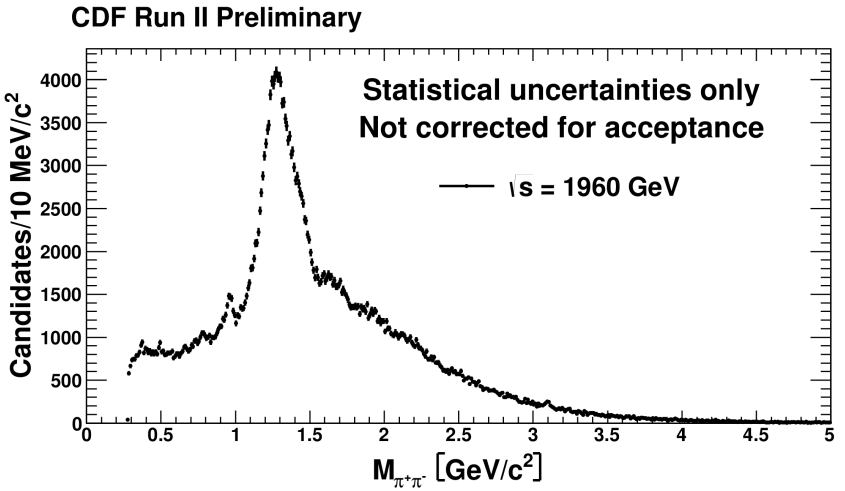


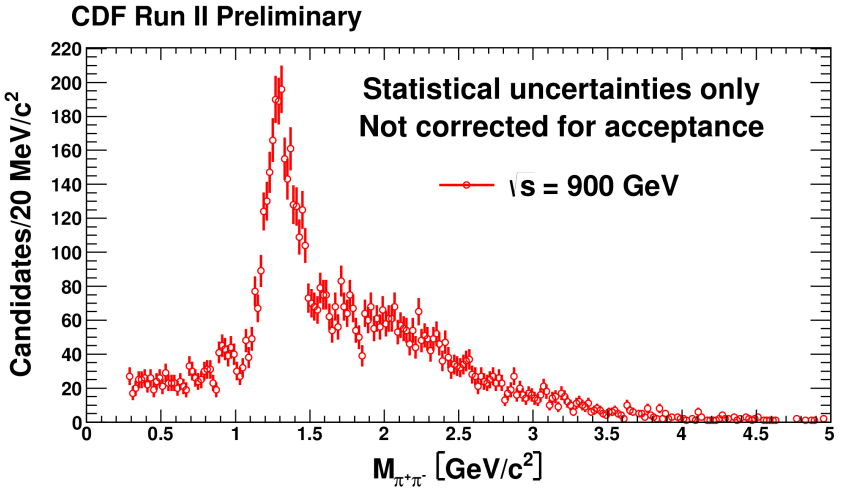
Exclusive efficiencies



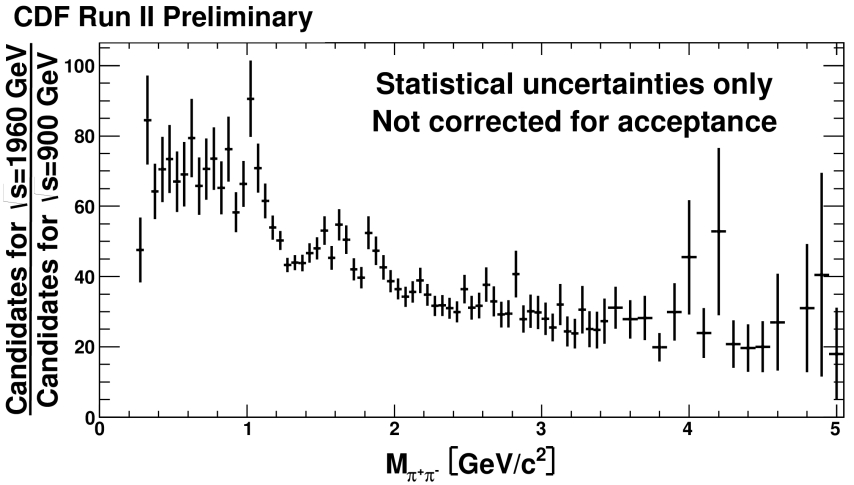


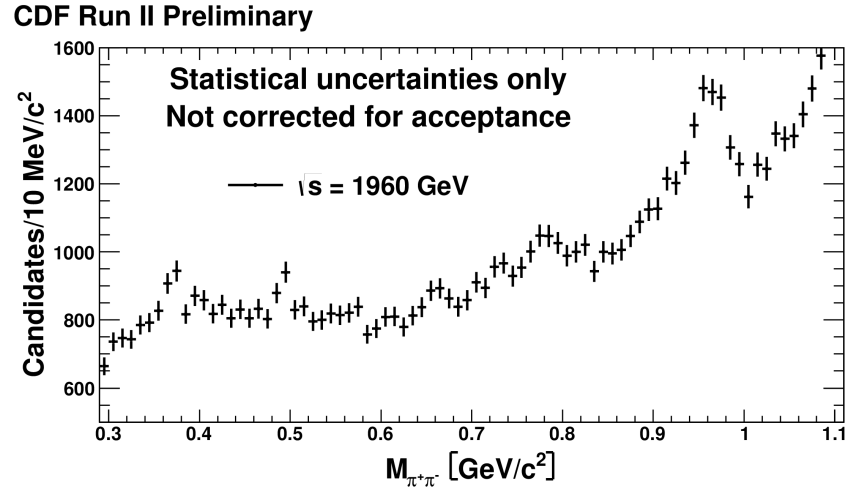
Not corrected for Acc



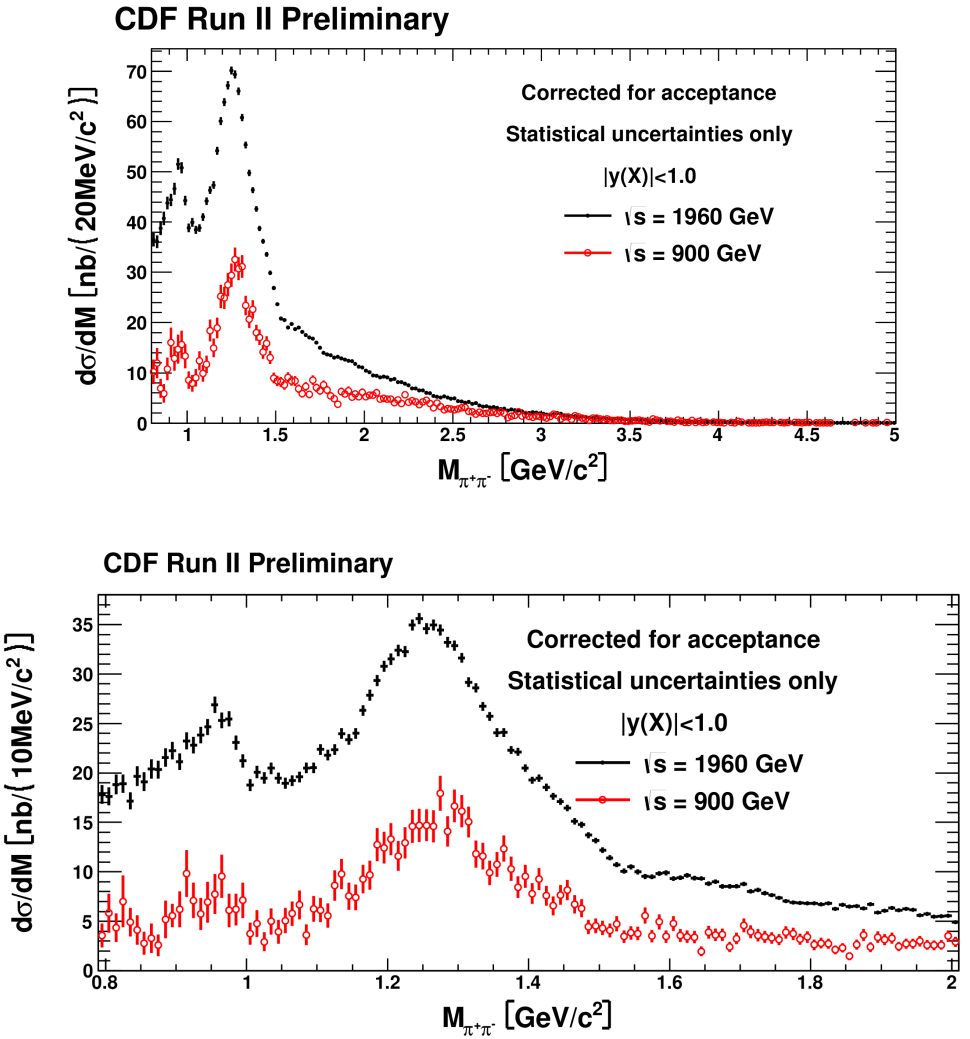


Ratio & Small mass region

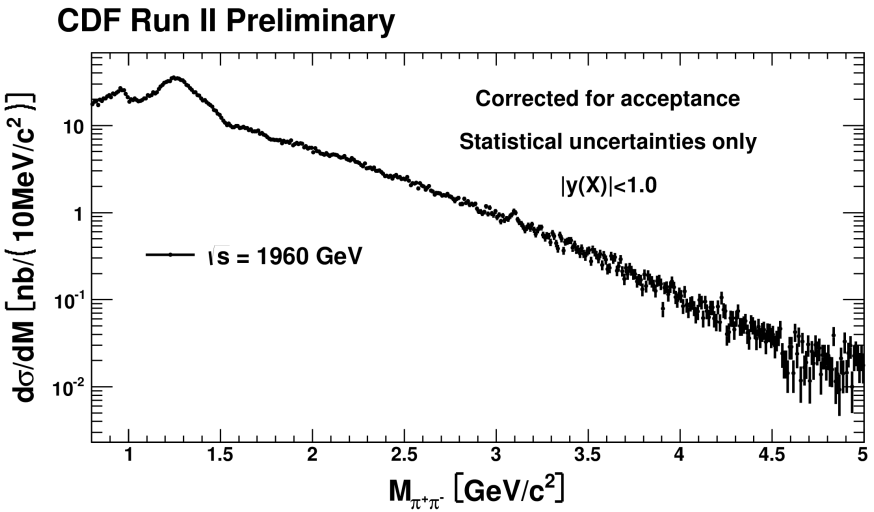


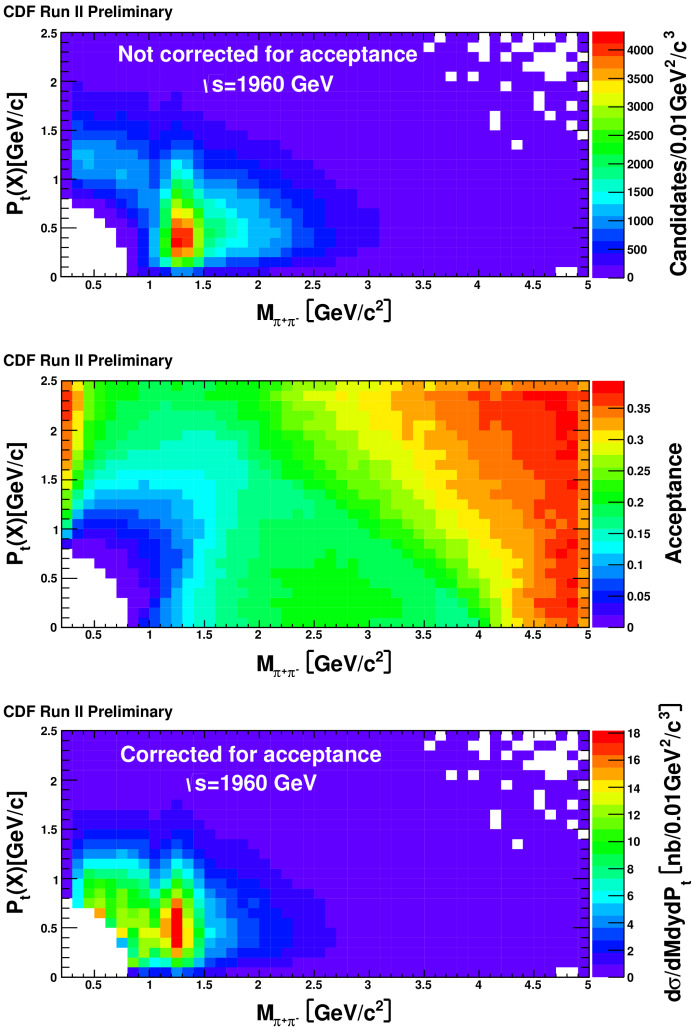


Mass corrected, energies compared

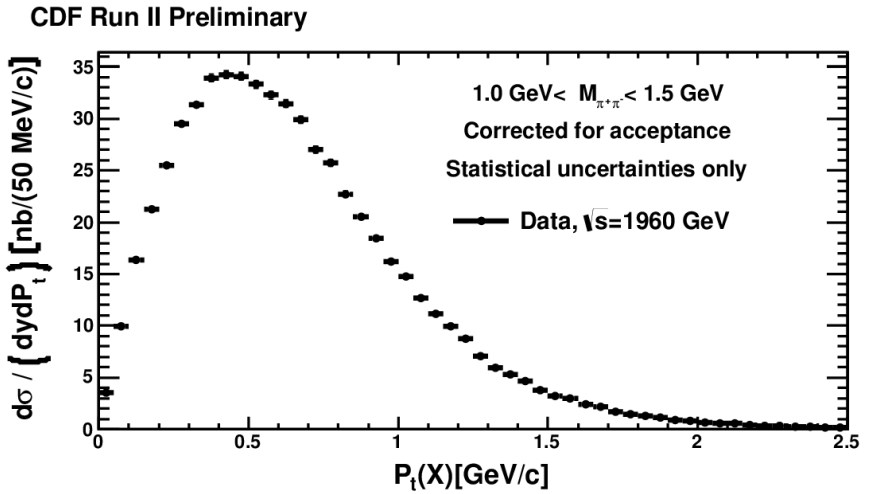


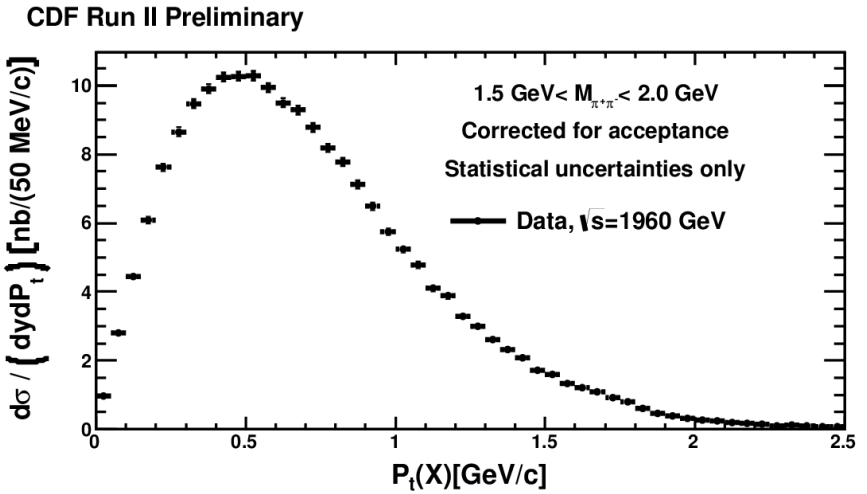
Mass 1960

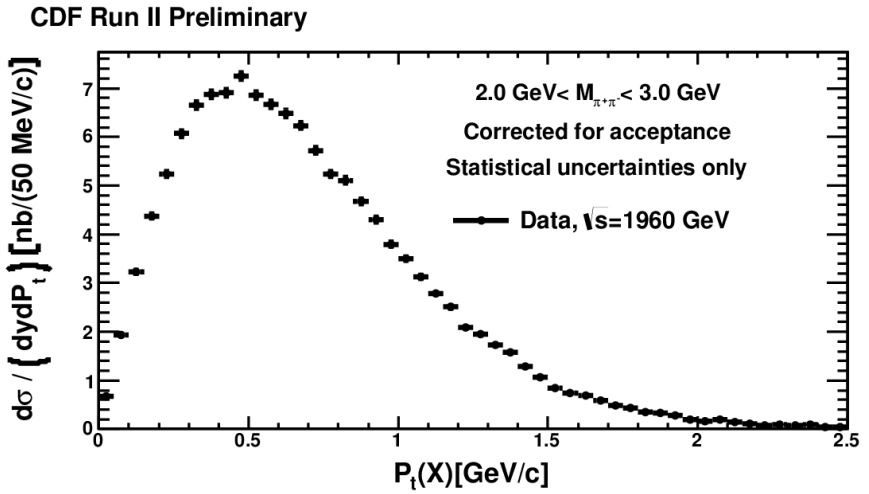

CDF Run II Preliminary
Corrected for acceptance
Statistical uncertainties only
|y(X)|<1.0
√s = 1960 GeV
dσ/dM [nb/(10MeV/c²)]
M_π+π- [GeV/c²]

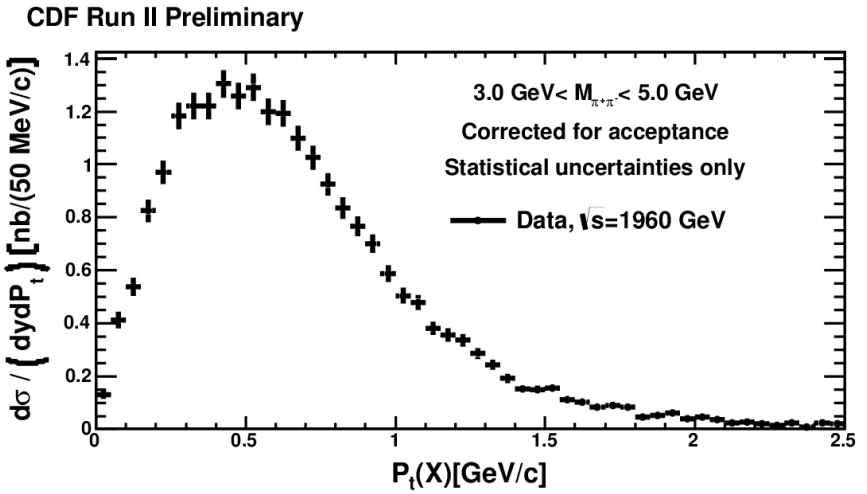

CDF Run II Preliminary
Not corrected for acceptance
√s=1960 GeV
P_t(X)[GeV/c]
M_π+π- [GeV/c²]
Candidates/0.01GeV²/c³
CDF Run II Preliminary
P_t(X)[GeV/c]
M_π+π- [GeV/c²]
Acceptance
CDF Run II Preliminary
Corrected for acceptance
√s=1960 GeV
P_t(X)[GeV/c]
M_π+π- [GeV/c²]
dσ/dMdydP_t [nb/0.01GeV²/c³]

Pt - Mass

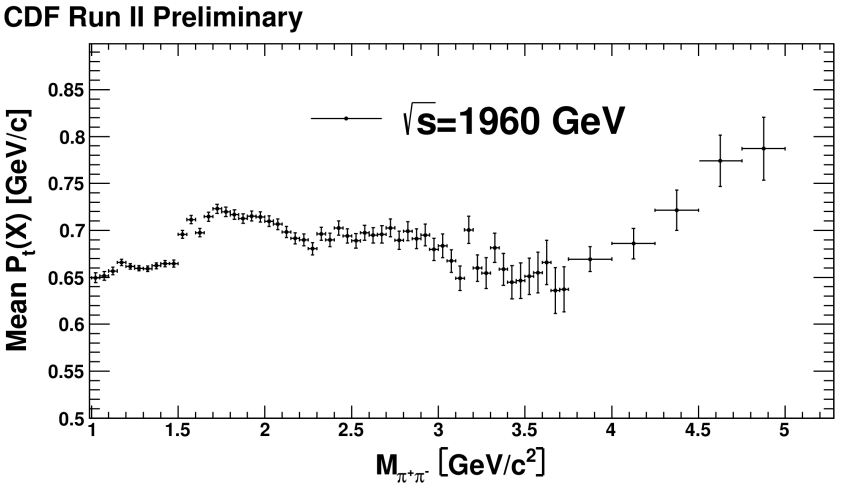

CDF Run II Preliminary
1.0 GeV< $M_{\pi^+\pi^-}$< 1.5 GeV
Corrected for acceptance
Statistical uncertainties only
Data, $\sqrt{s}$=1960 GeV
$d\sigma / \{ dydP_t \}$ [nb/(50 MeV/c)]
$P_t(X)$[GeV/c]

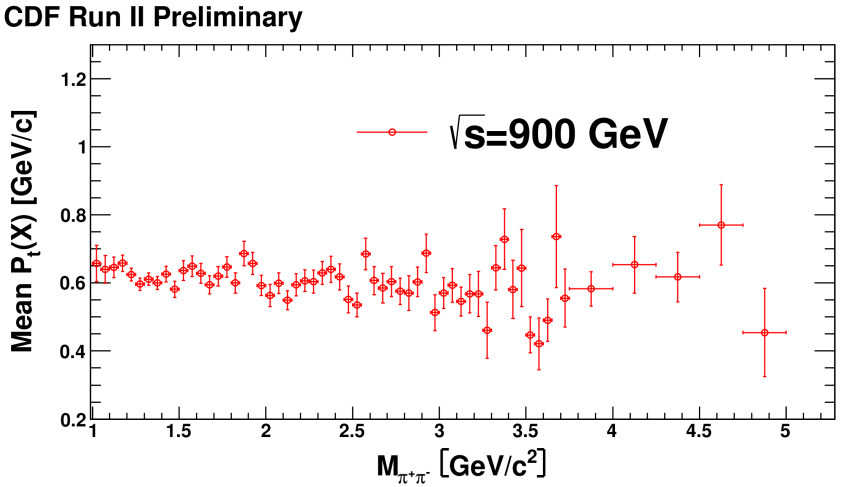

CDF Run II Preliminary
1.5 GeV< $M_{\pi^+\pi^-}$< 2.0 GeV
Corrected for acceptance
Statistical uncertainties only
Data, $\sqrt{s}$=1960 GeV
$d\sigma / \{ dydP_t \}$ [nb/(50 MeV/c)]
$P_t(X)$[GeV/c]


CDF Run II Preliminary
2.0 GeV< $M_{\pi^+\pi^-}$< 3.0 GeV
Corrected for acceptance
Statistical uncertainties only
Data, $\sqrt{s}$=1960 GeV
$d\sigma / \{ dydP_t \}$ [nb/(50 MeV/c)]
$P_t(X)$[GeV/c]

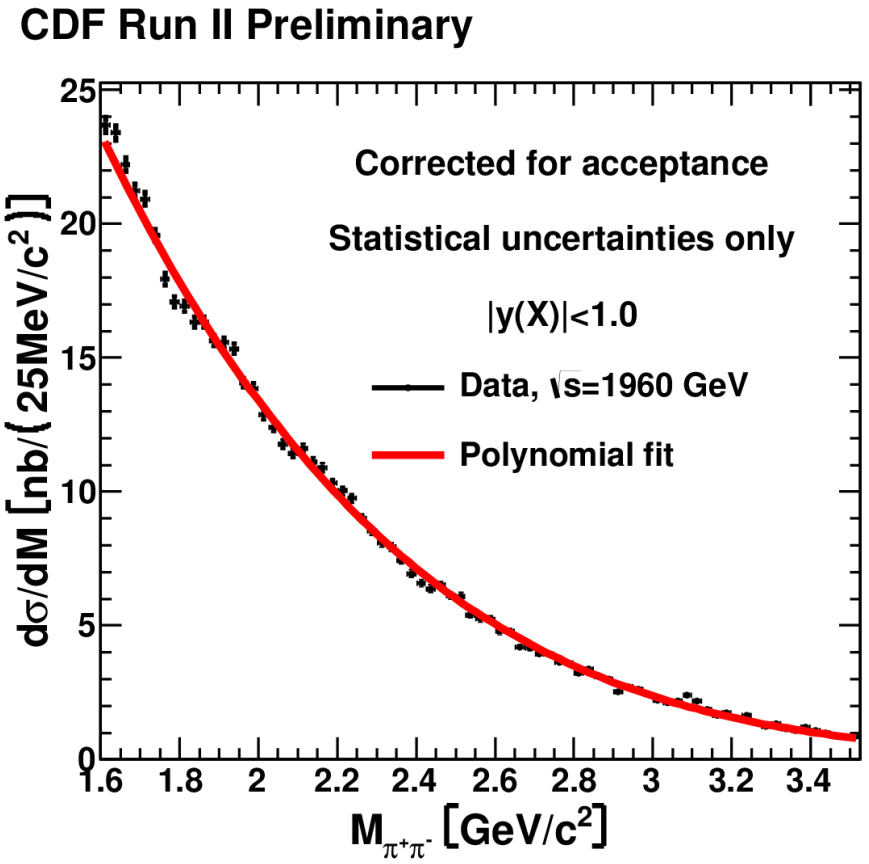

CDF Run II Preliminary
3.0 GeV< $M_{\pi^+\pi^-}$< 5.0 GeV
Corrected for acceptance
Statistical uncertainties only
Data, $\sqrt{s}$=1960 GeV
$d\sigma / \{ dydP_t \}$ [nb/(50 MeV/c)]
$P_t(X)$[GeV/c]

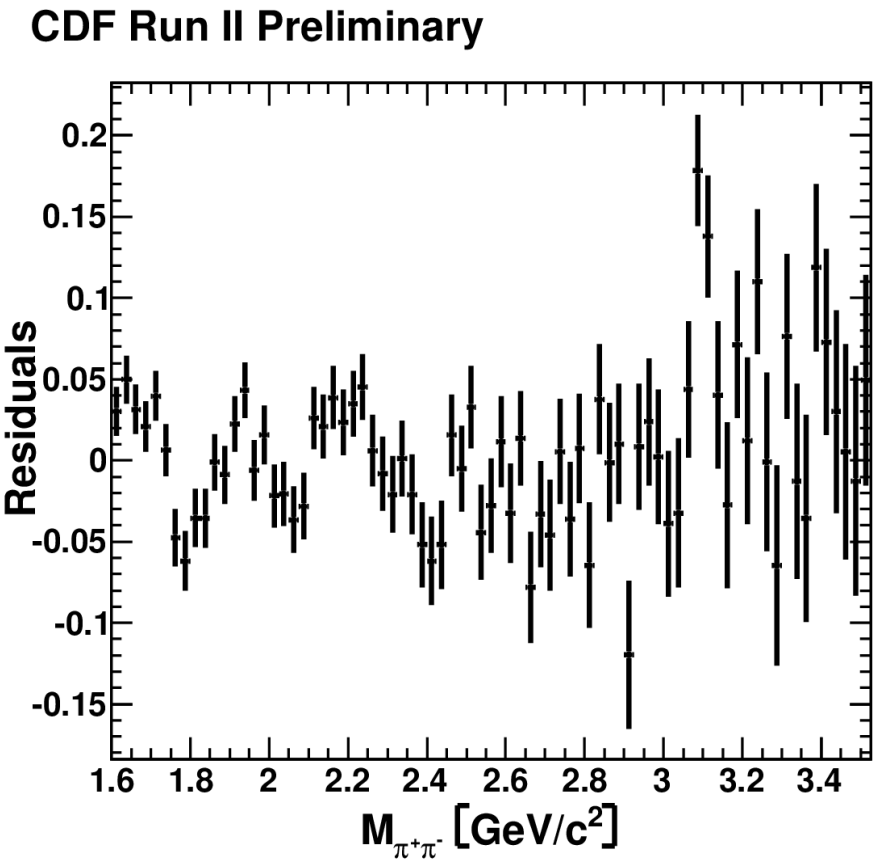
Mean Pt


CDF Run II Preliminary
√s=1960 GeV
Mean P_t(X) [GeV/c]
M_π+π- [GeV/c²]

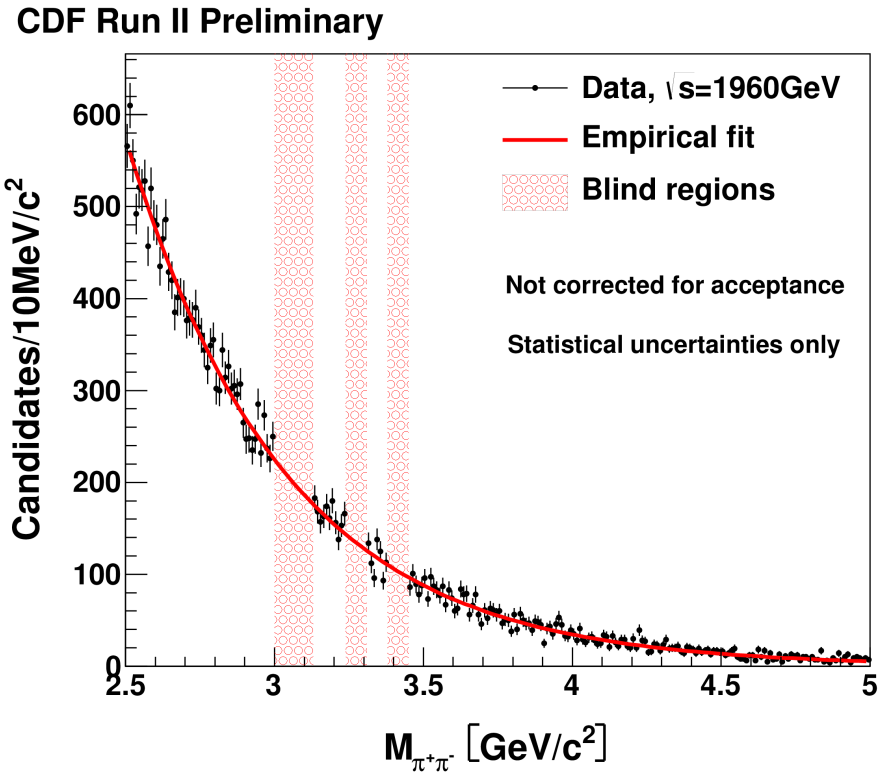

CDF Run II Preliminary
√s=900 GeV
Mean P_t(X) [GeV/c]
M_π+π- [GeV/c²]

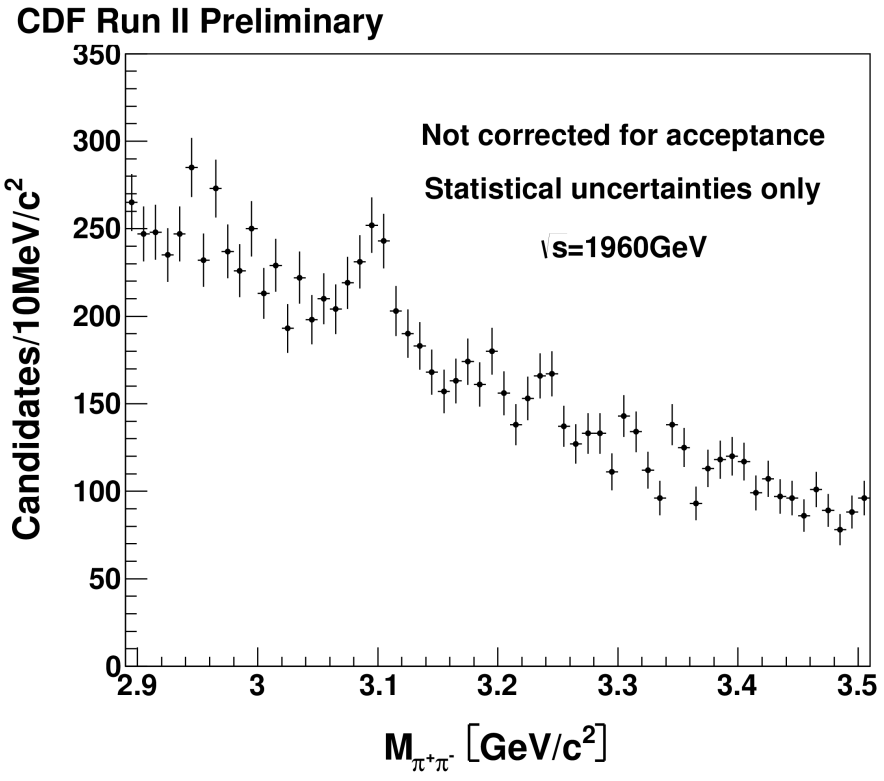
Tail fit + residuals



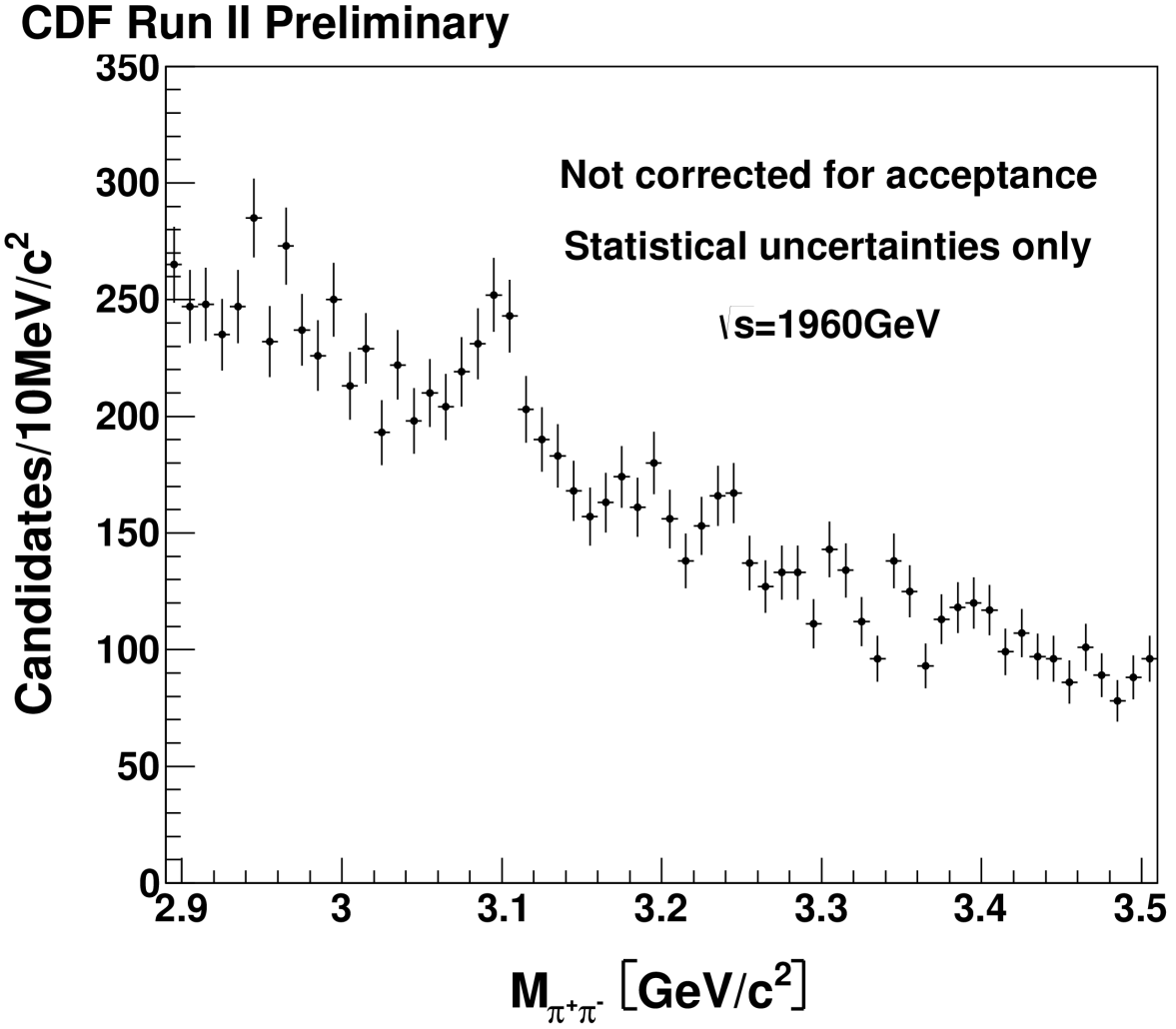


Background fit
Chi_c, J/psi region



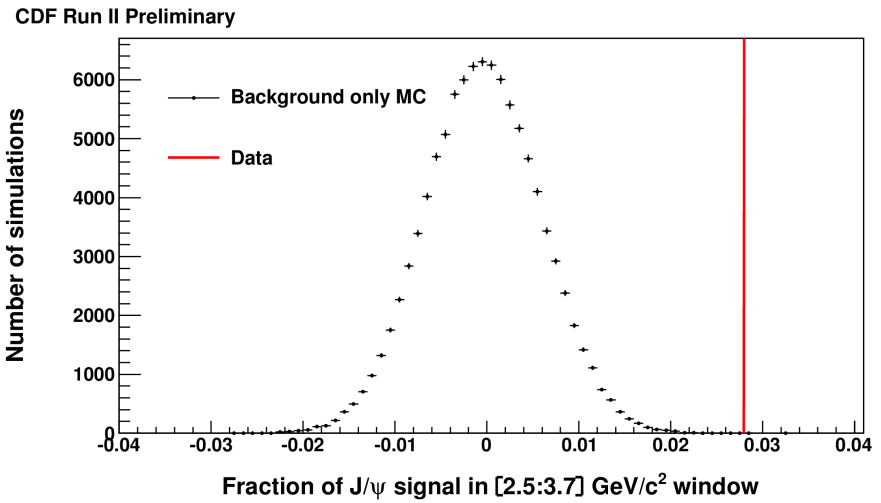


J/psi peak region



J/psi

- S+B = 27769 events
- Fraction of J/psi: 2.80%
- Acceptance: 16.7%
- BR: 5.94%
- Luminosity: 1183 nb
- Significance: 4.47 σ



Chi_c limits:

- pi+pi-
- Events: 69.6
- Acceptance: 24.2%
- BR: 0.567%
- Limit:
  - 21.35 nb

- K+K-
- Events: 59.2
- Acceptance: 21.8%
- BR: 0.606%
- Limit:
  - 18.95 nb