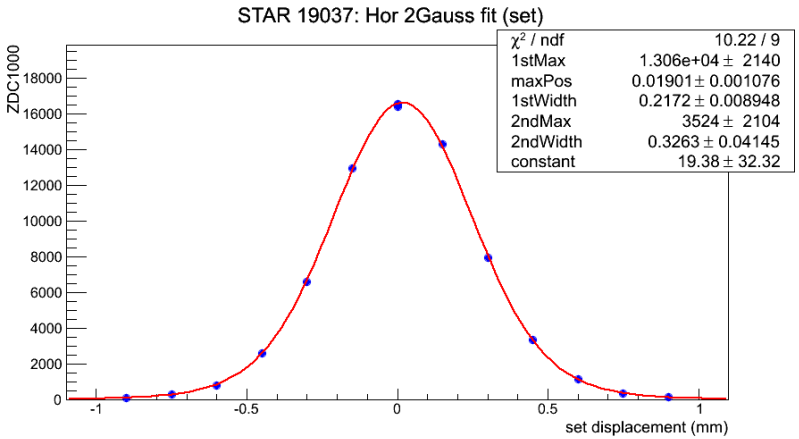
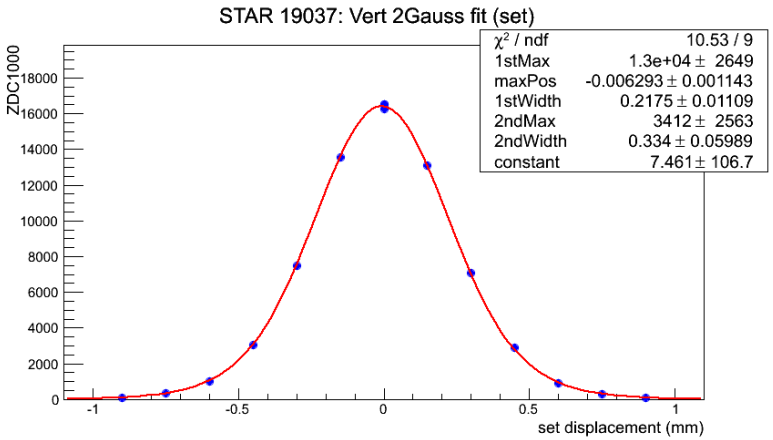
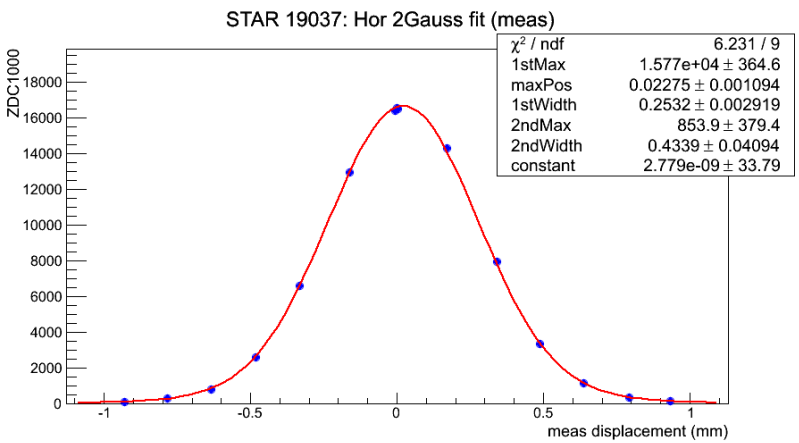
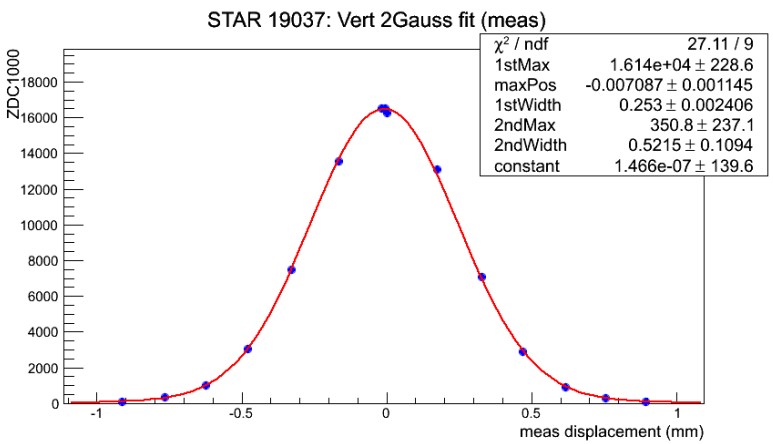
STAR ZDC



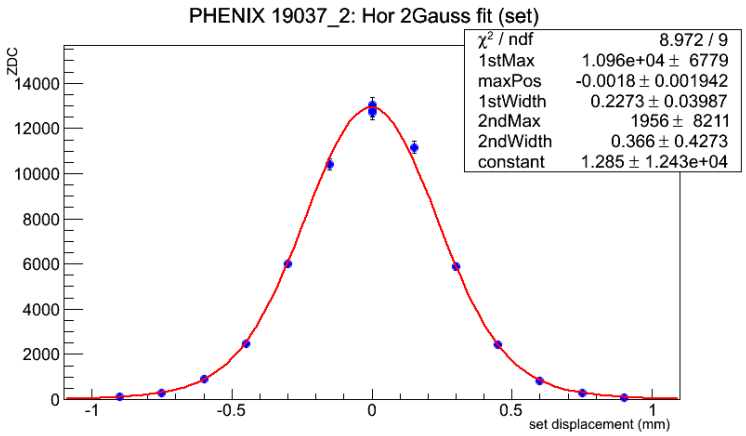


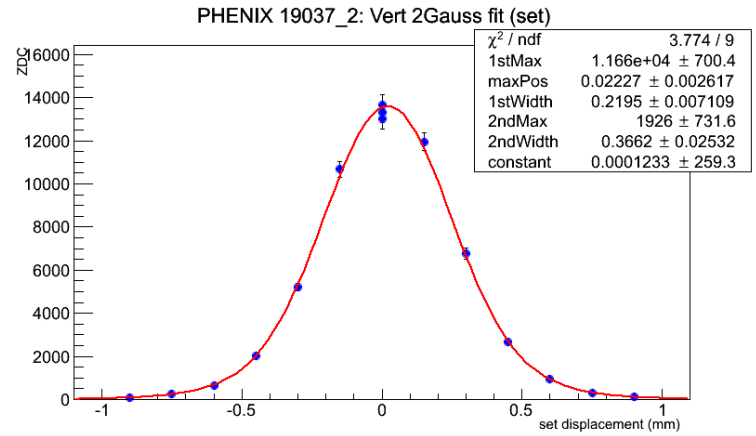


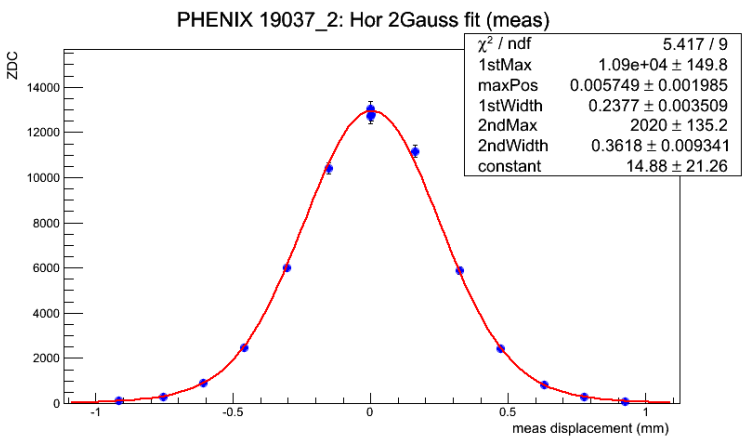


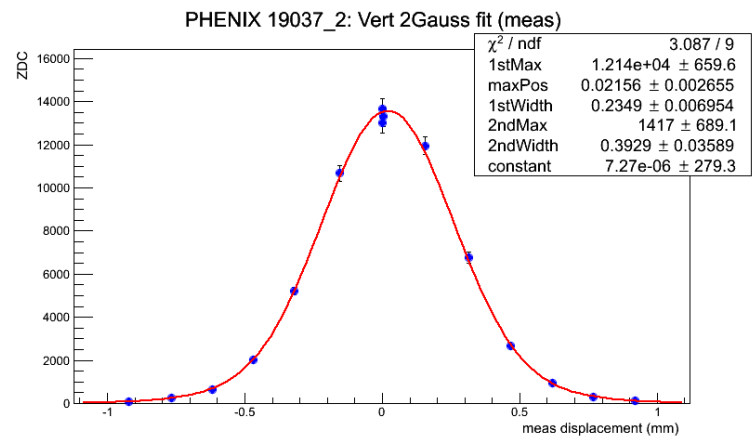
Xsec = 35 mb

PHENIX ZDC





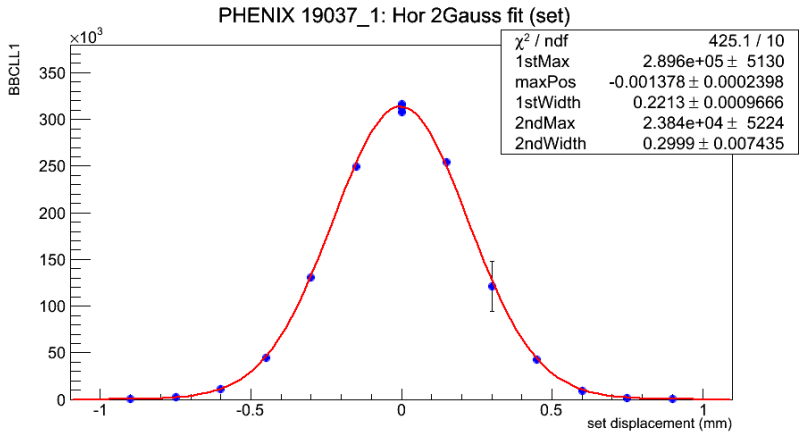


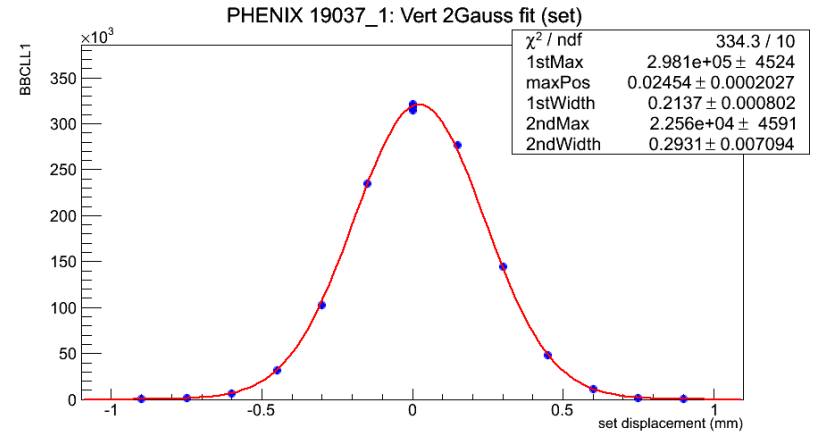


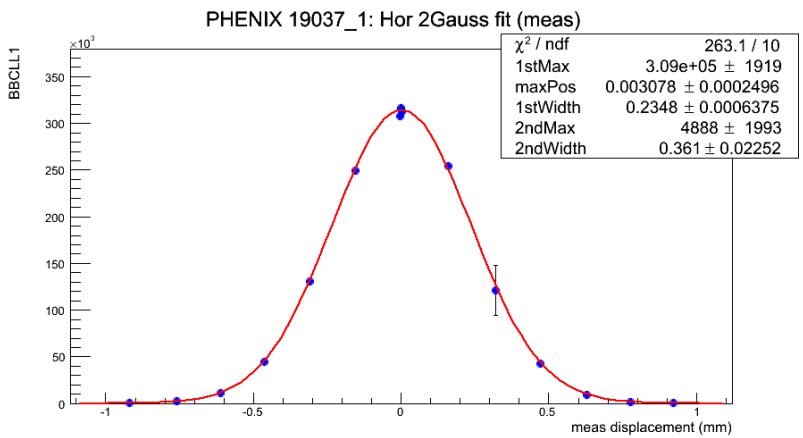
Emittance: 2.6 mm mrad (ZDC)
2.5 mmmrad (IPM)
Xsec: 34 mb +/- 2 mb
Lumi = 45 e28 cm^-2 s^-1

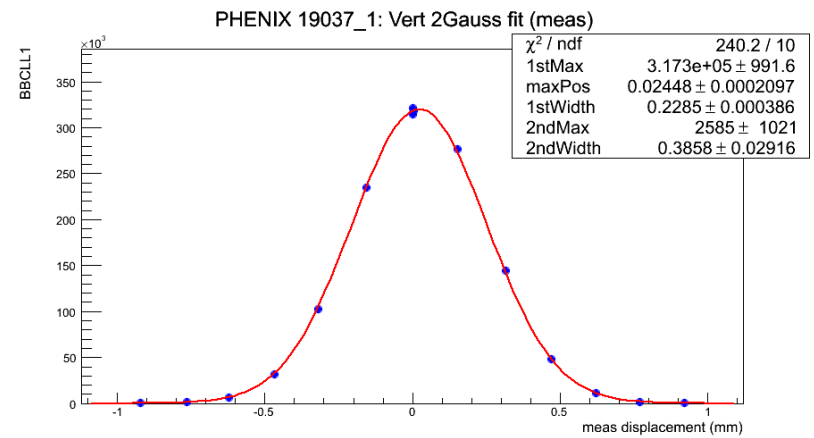
Round beams:
H = 0.243 mm
V = 0.236 mm

PHENIX BBCLL1





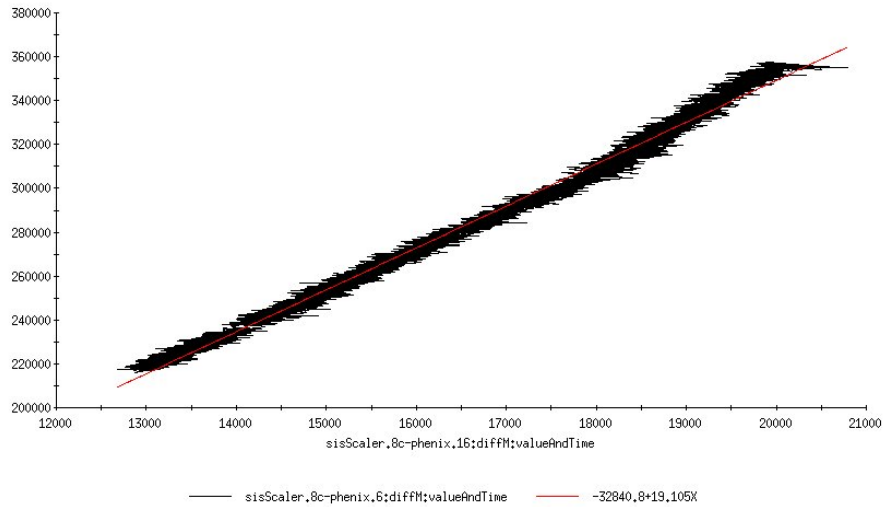


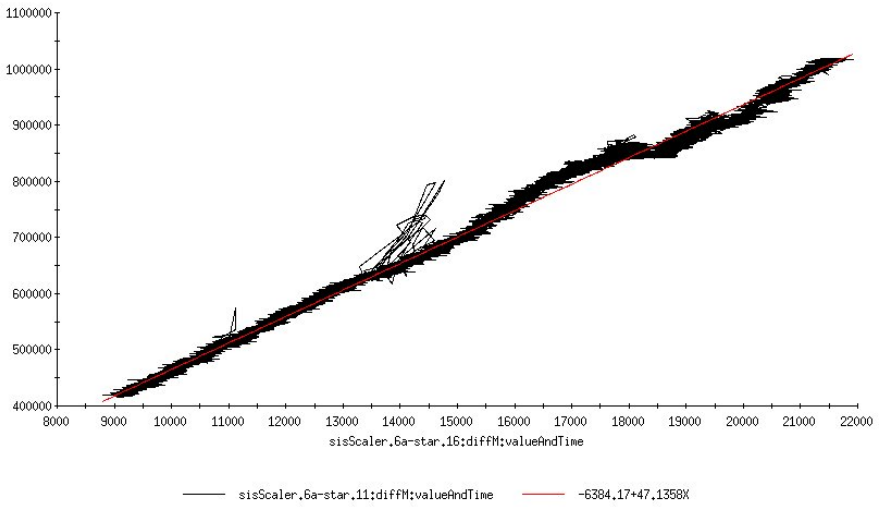


Beam sizes:
H = 0.227 mm
V = 0.219 mm

Ratio H/V is the same as for ZDC

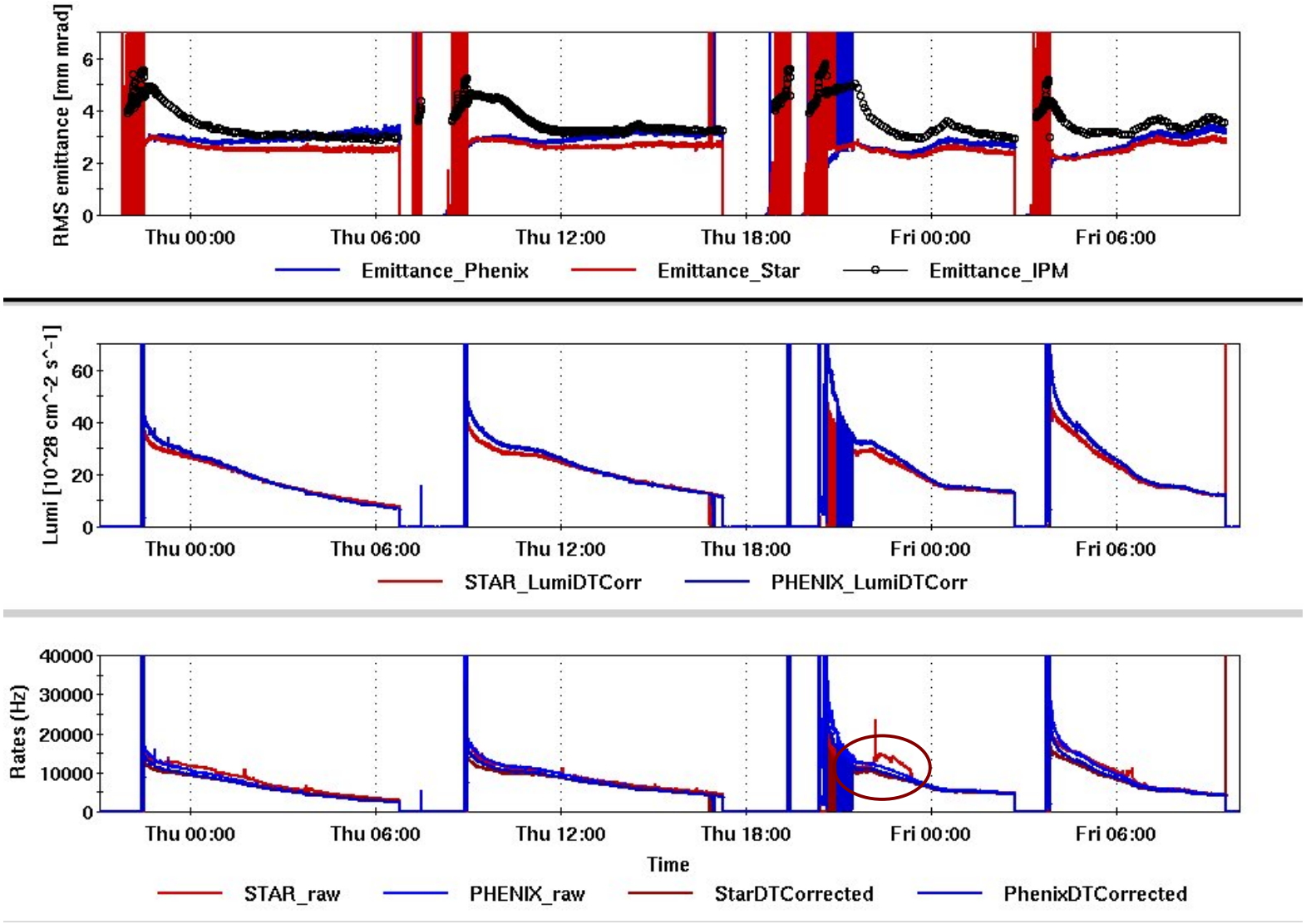
Compare BBC with ZDC





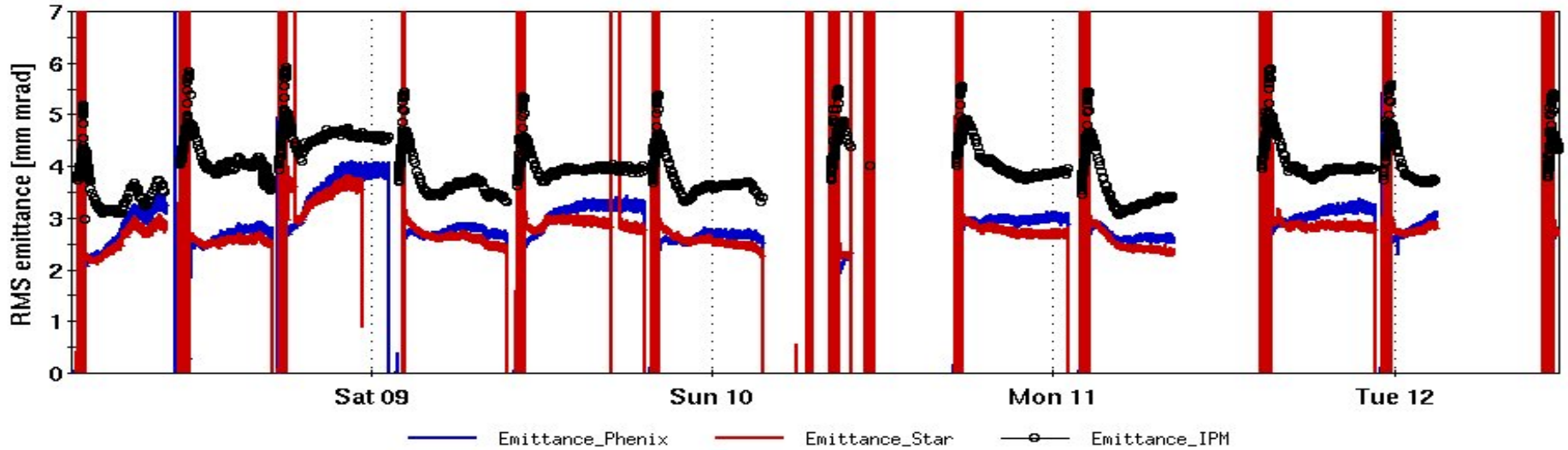
Ratio is more or less constant during the store
(uncorrected signals)

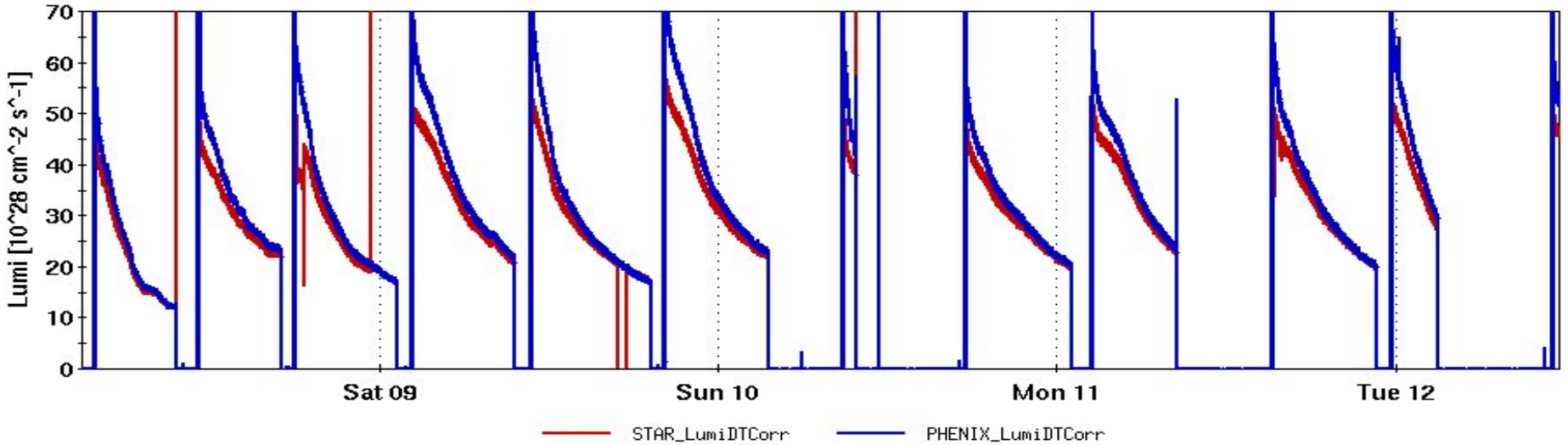
Corrected signals and emittance from collision rates



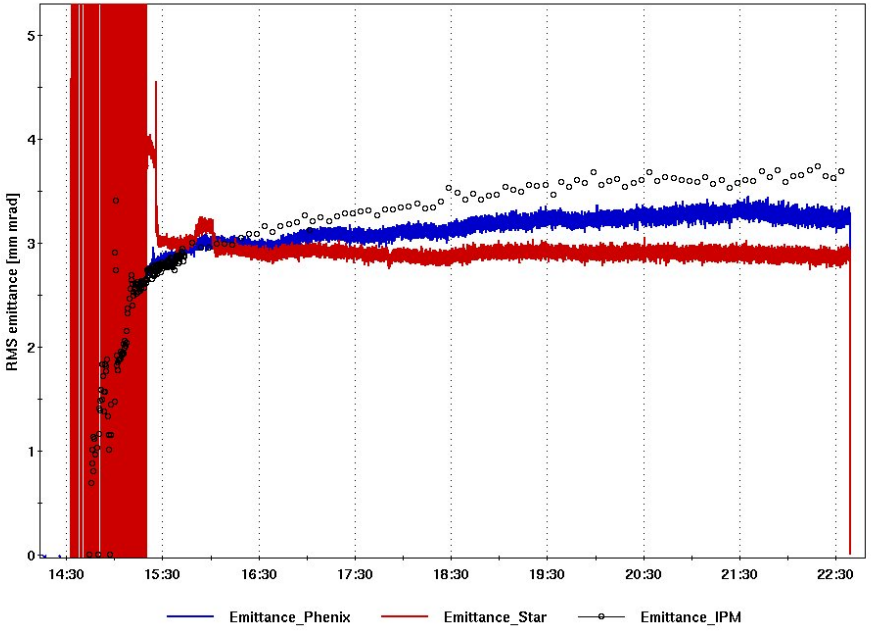
19034 -19038

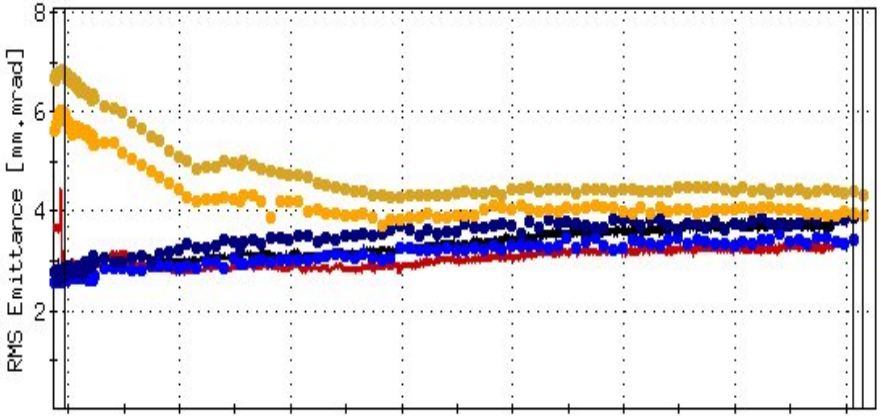
19038 - now


RMS emittance [mm mrad]
0
1
2
3
4
5
6
7
Sat 09
Sun 10
Mon 11
Tue 12
Emittance_Phenix
Emittance_Star
Emittance_IPM


Lumi [10^28 cm^-2 s^-1]
0
10
20
30
40
50
60
70
Sat 09
Sun 10
Mon 11
Tue 12
STAR_LumiDTCorr
PHENIX_LumiDTCorr

Emittance from collision rates vs IPM emittance





Follows blue emittance