

Run12 Cu+Au Run Discussion

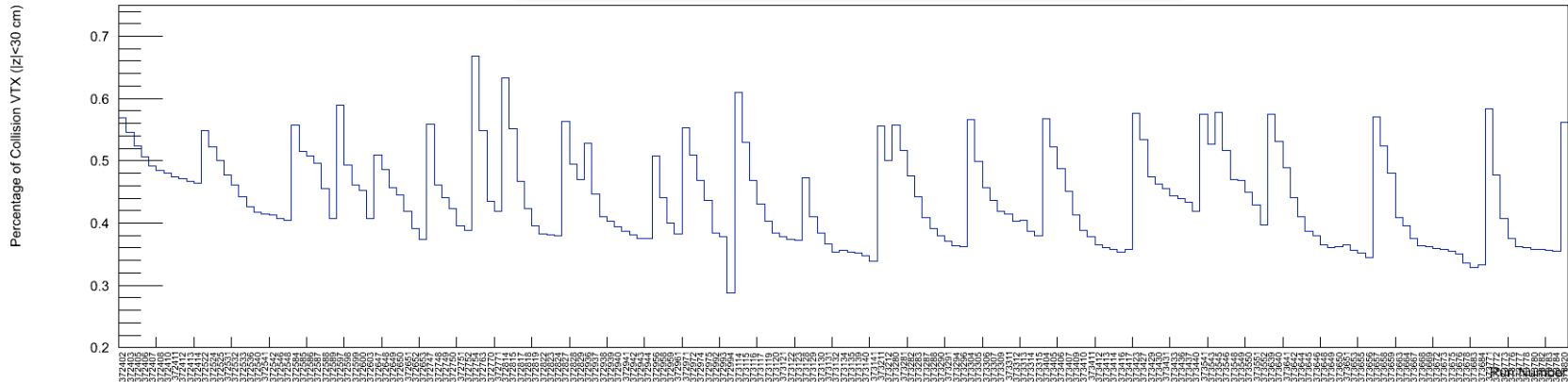
Xiaochun He

Georgia State University

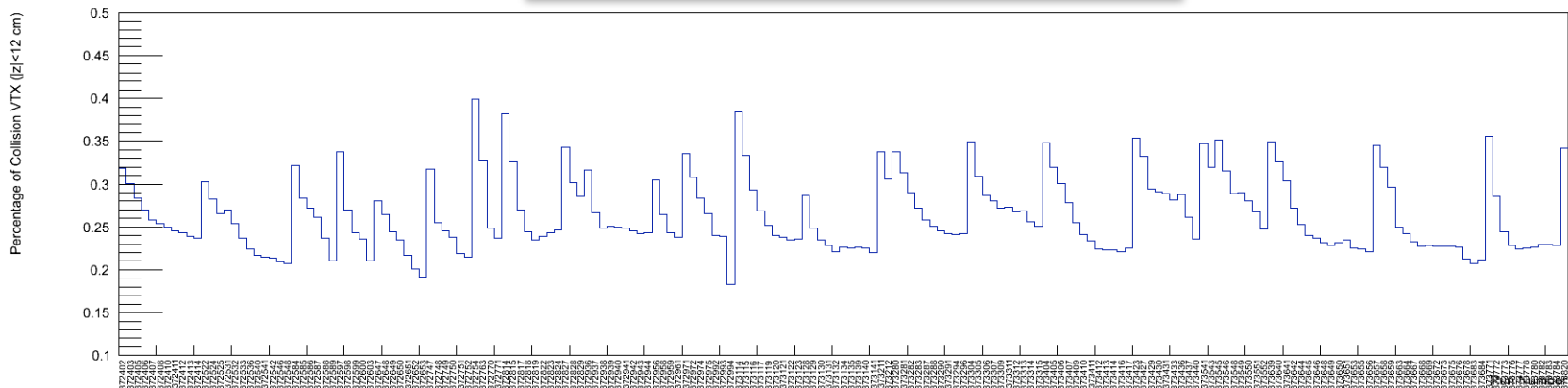
1. Recent collision vertex distributions
2. Loss of Muon Piston Calorimeter in PHENIX for Run-12

Narrow & Wide Vtx Distribution

MinBias VTX Distribution in Cu_Au



Narrow VTX Distribution in Cu_Au

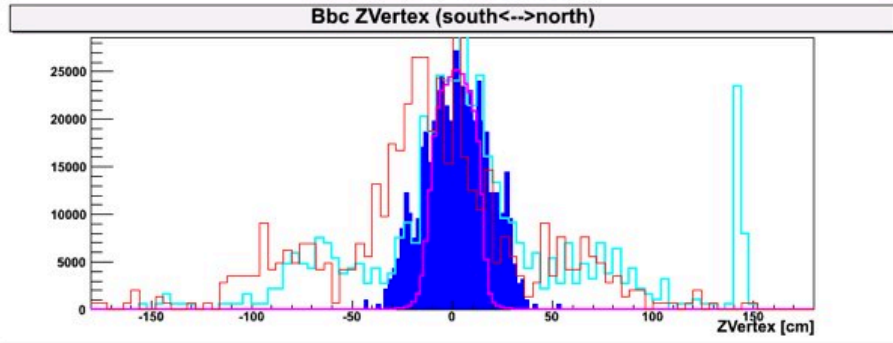


Online Monitoring

Fill 16930



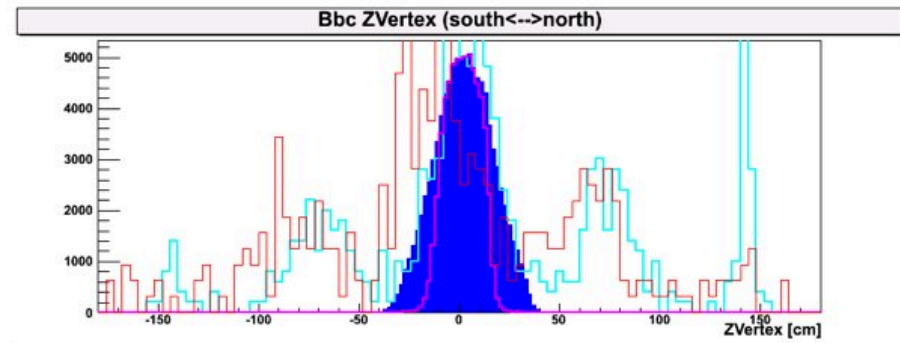
Run #373772 Events: 161255 Date: Mon May 28 20:48:23 2012



Z^{Fit}_{BBLL1 w/o Vtx} = 2.9 cm (σ = 22 cm) ... OK

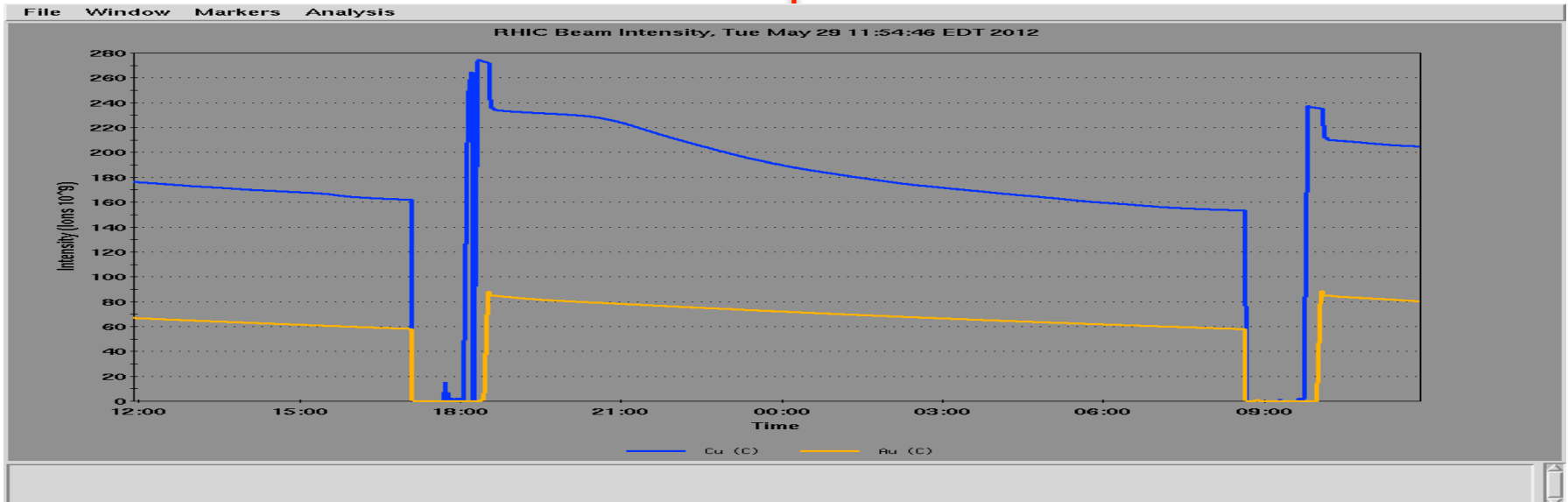
Z [Trigger]	Zbbc [BBLL1]	Zzdc [ZDCLL1wide]	Zbbc [BBCLL1(noVtx)]	Zbbc [BBCLL1(narrowVtx)]
(Scale Fac.) #Evt.	(534) 962	(1334) 673	(1068) 1035	(2) 159074
< All histograms are scaled by scaled factor >				
Vertex Mean (RMS)	2.2cm (15.5 cm)	-11.7cm (49.8 cm)	12.2cm (57.1 cm)	1.6cm (8.6 cm)

Run #373784 Events: 98487 Date: Tue May 29 08:30:06 2012

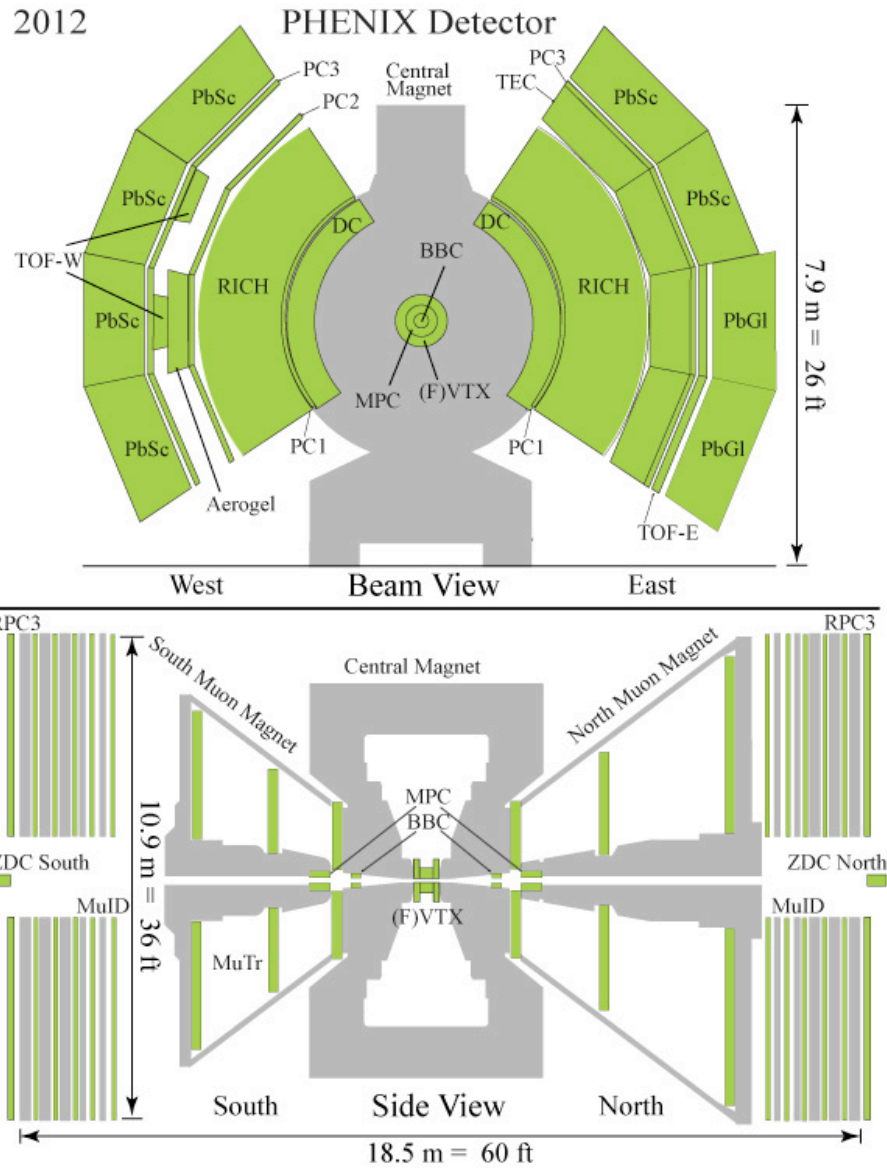


Z^{Fit}_{BBLL1 w/o Vtx} = 2.6 cm (σ = 19 cm) ... OK

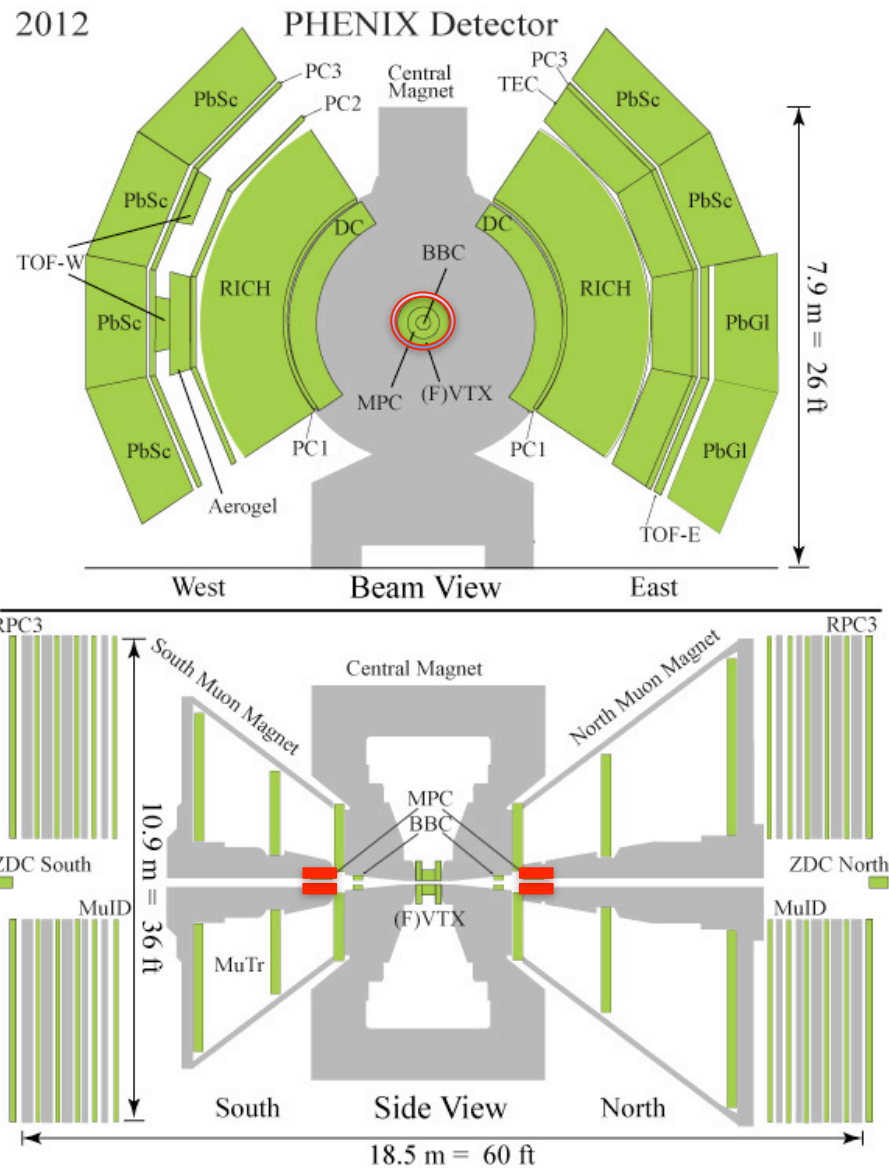
Z [Trigger]	Zbbc [BBLL1]	Zzdc [ZDCLL1wide]	Zbbc [BBCLL1(noVtx)]	Zbbc [BBCLL1(narrowVtx)]
(Scale Fac.) #Evt.	(1) 97766	(501) 389	(401) 731	(1) 63455
< All histograms are scaled by scaled factor >				
Vertex Mean (RMS)	2.3cm (14.5 cm)	-4.6cm (65.8 cm)	23.6cm (73 cm)	1.7cm (8.3 cm)

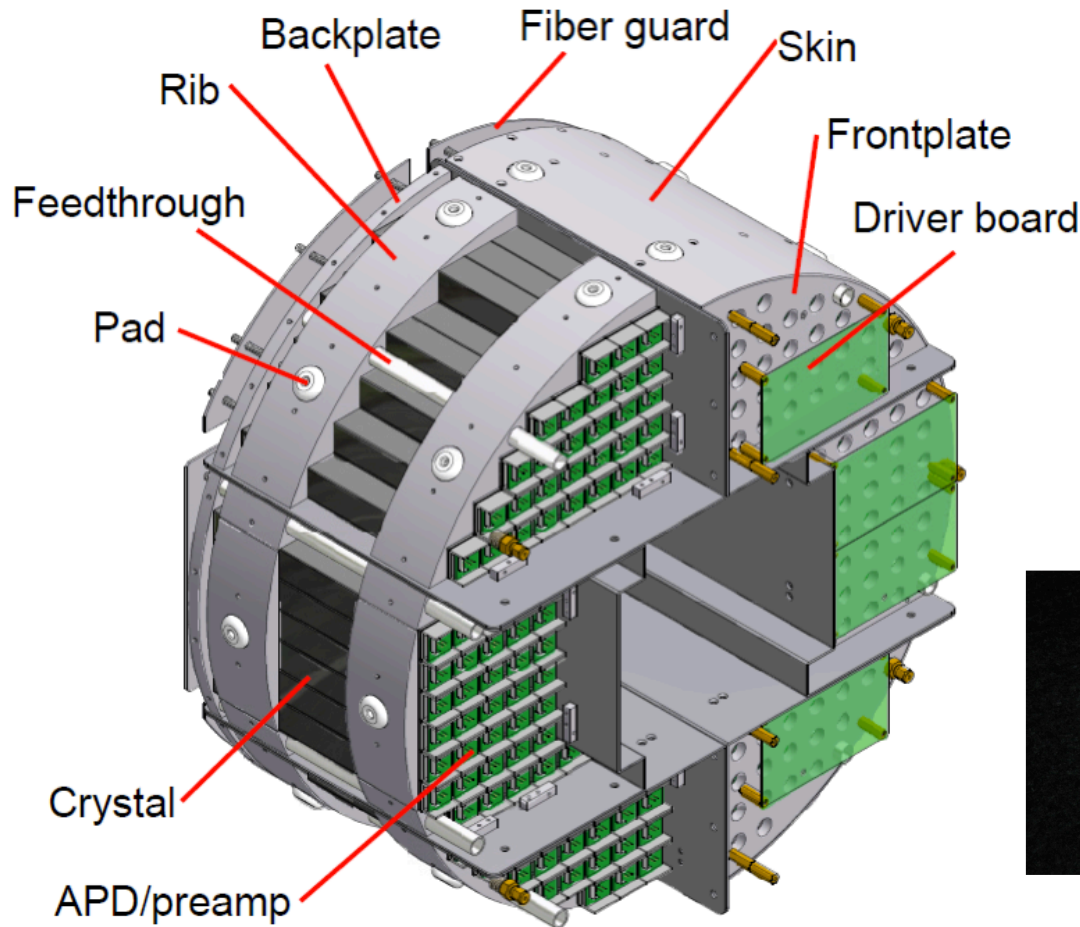


Run-12 Configuration



Run-12 Configuration



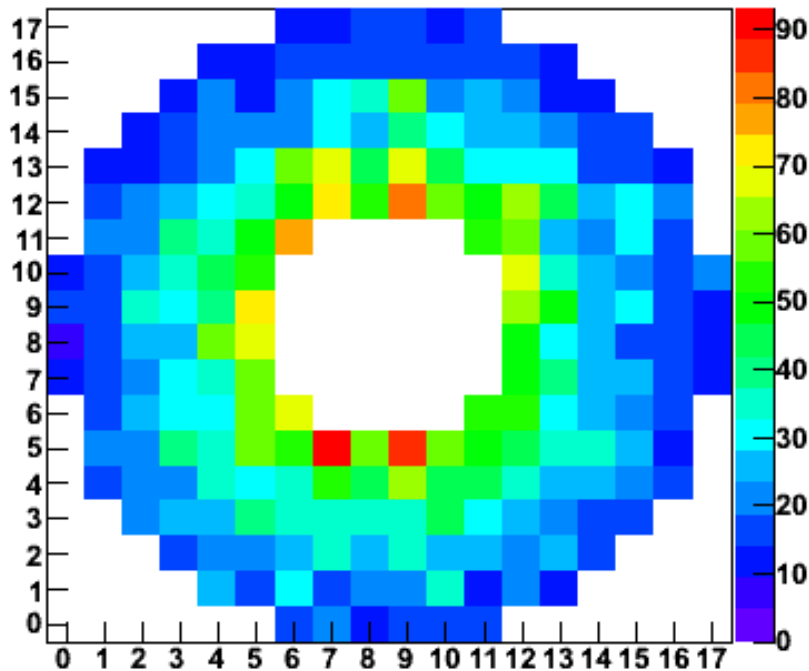


- Lost APD/preamp was not new to us but NOT in such a large scale.
- The last significant losses occurred during Run-10 period. We lost 5 readouts in each of unexpected beam dumps.

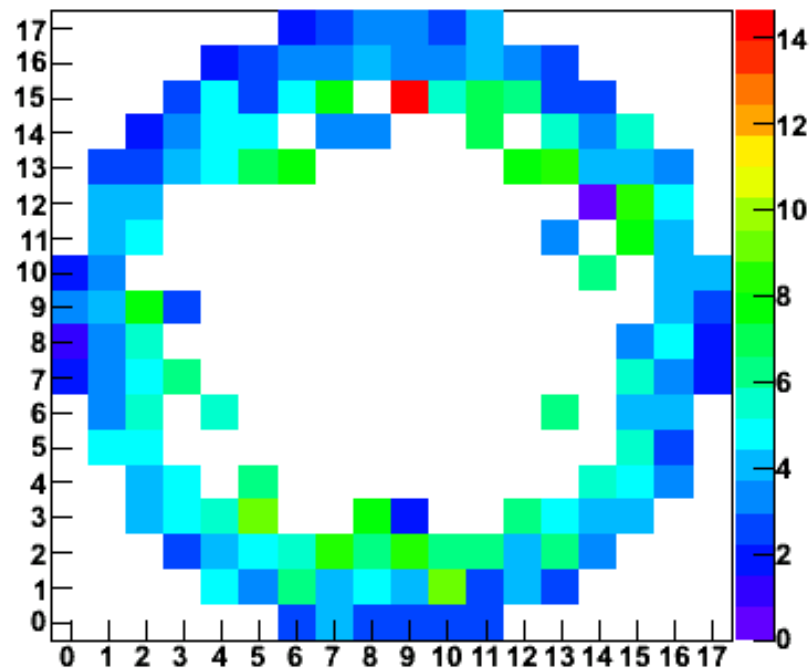
North MPC, Before and After

Hit by Cu beam

Energy Per North Crystal, BBC Triggers



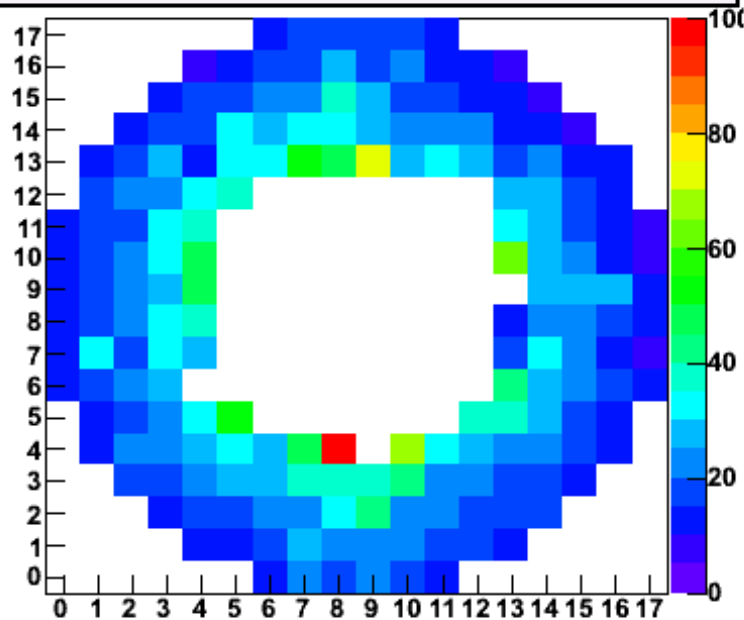
Energy Per North Crystal, BBC Triggers



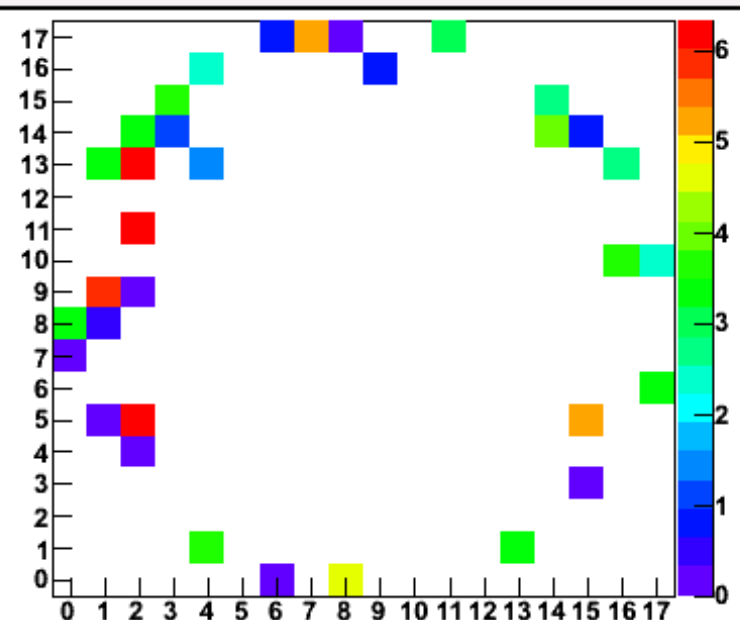
South MPC, Before and After

Hit by Au beam

Energy Per South Crystal, BBC Triggers



Energy Per South Crystal, BBC Triggers



- We lost about 300 crystal readout out of 416 in total.
- The only way to fix the problem is to wait for summer shutdown.
- Add about 2-week extra work to the planned shutdown activities.

BACKUP

Online Monitoring

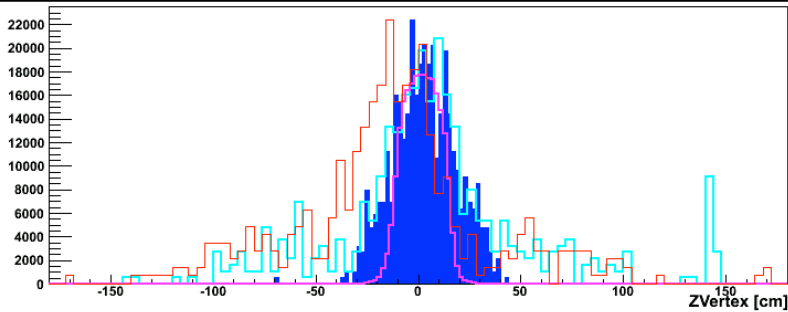
Fill 16903



BBC ONLINE MONITOR

Run #372936 Events: 115944 Date: Tue May 22 07:02:22 2012

Bbc ZVertex (south<-->north)



Z^{Fit}_{BBLL1 w/o Vtx} = 3.2 cm (σ = 21 cm) ... OK

Z [Trigger] Zbbc [BBLL1] Zzdc [ZDCLL1wide] Zbbc [BBCLL1(noVtx)] Zbbc [BBCLL1(narrowVtx)]

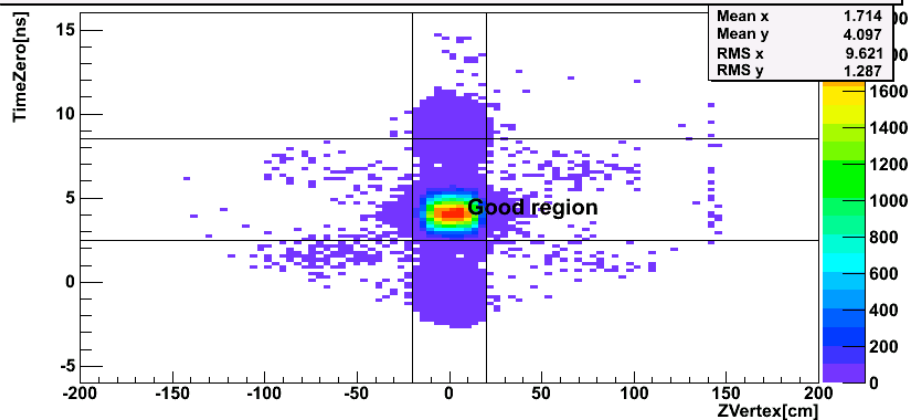
(Scale Fac.) #Evt. (534) 690 (1334) 454 (1068) 680 (2) 114473

< All histograms are scaled by scaled factor >

Vertex Mean (RMS) 2.9cm (15.5 cm) -12.5cm (47.6 cm) 7cm (48.9 cm) 1.6cm (8.5 cm)

σ_{ZDC} = 0.000 ε_{BBC} = 0.000 beam in acceptance_{ZDC} = 0.231 beam in acceptance_{BBC} = 1.338

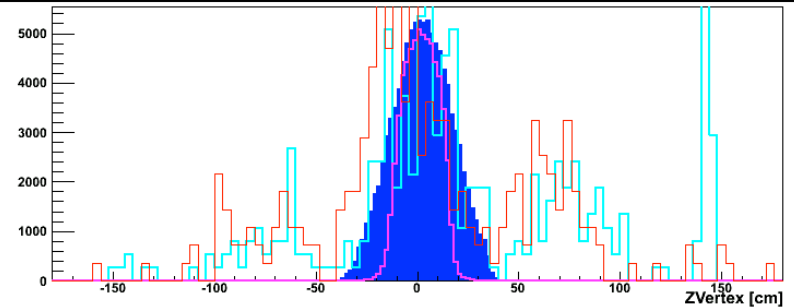
TimeZero vs ZVertex



BBC ONLINE MONITOR

Run #372941 Events: 72049 Date: Tue May 22 11:26:58 2012

Bbc ZVertex (south<-->north)



Z^{Fit}_{BBLL1 w/o Vtx} = 3.6 cm (σ = 19 cm) ... OK

Z [Trigger] Zbbc [BBLL1] Zzdc [ZDCLL1wide] Zbbc [BBCLL1(noVtx)] Zbbc [BBCLL1(narrowVtx)]

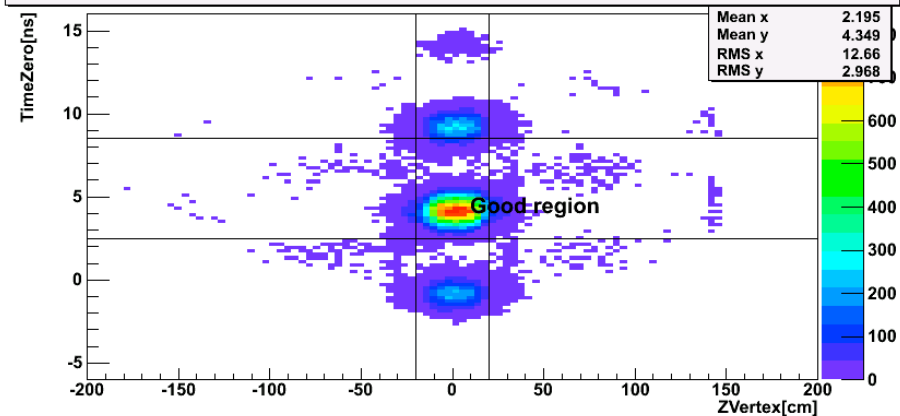
(Scale Fac.) #Evt. (4) 25507 (668) 277 (534) 444 (1) 62548

< All histograms are scaled by scaled factor >

Vertex Mean (RMS) 2.3cm (14.8 cm) 3.1cm (54.3 cm) 27.2cm (67.4 cm) 1.8cm (8.5 cm)

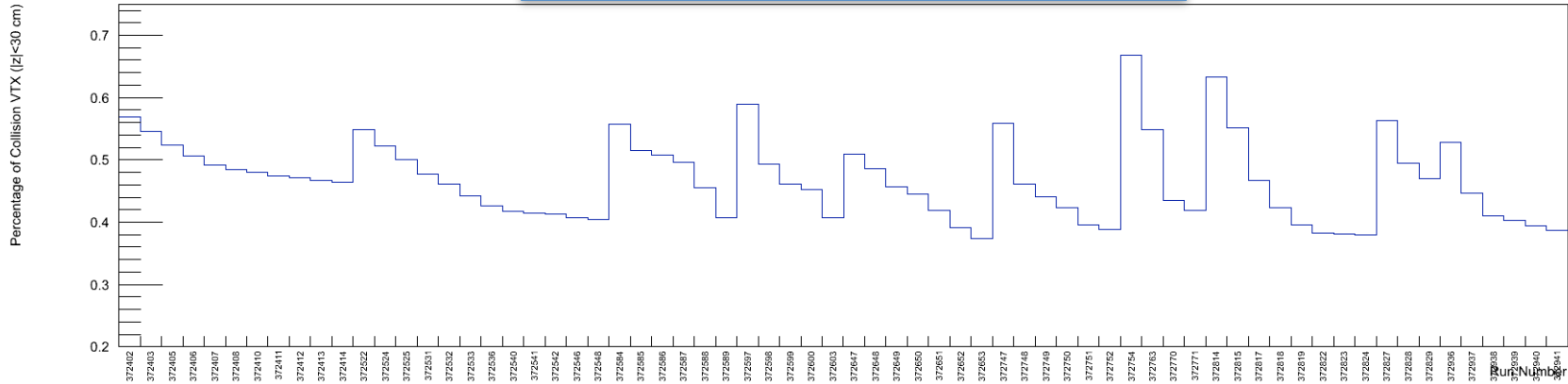
σ_{ZDC} = 0.669 ε_{BBC} = 1.286 beam in acceptance_{ZDC} = 0.203 beam in acceptance_{BBC} = 1.235

TimeZero vs ZVertex



Narrow & Wide Vtx Distribution

MinBias VTX Distribution in Cu_Au



Narrow VTX Distribution in Cu_Au

