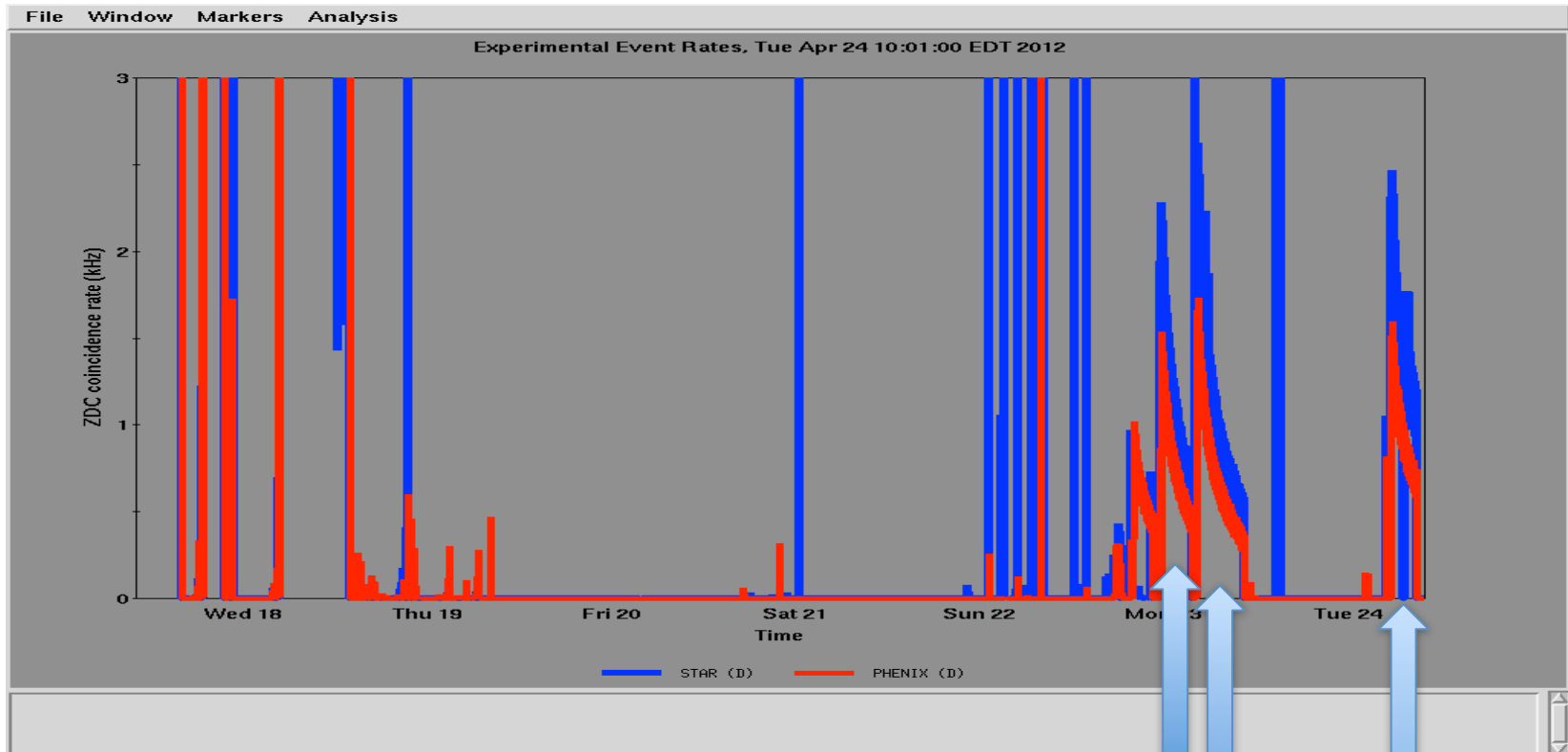


PHENIX has been efficiently using the three stores for detector setup.

# Fill-by-Fill Analysis

Xiaochun He

# Three Exp Setup Stores



Two runs taken (16770)

Eight runs taken (16771)

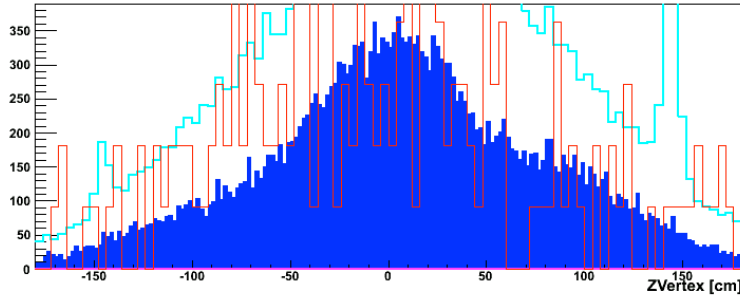
Three runs taken (16775)

# VTX Distributions (Fill 16770, very first)

## BBC ONLINE MONITOR

Run #369194 Events: 85449 Date: Mon Apr 23 03:07:28 2012

### Bbc ZVertex (south<-->north)



$Z_{BBCLL1}^{Fit} \text{ w/o } V_{tx} = 10.4 \text{ cm } (\sigma = 65 \text{ cm}) \dots$  See  $Z_{ZDC}$  or Ask SL

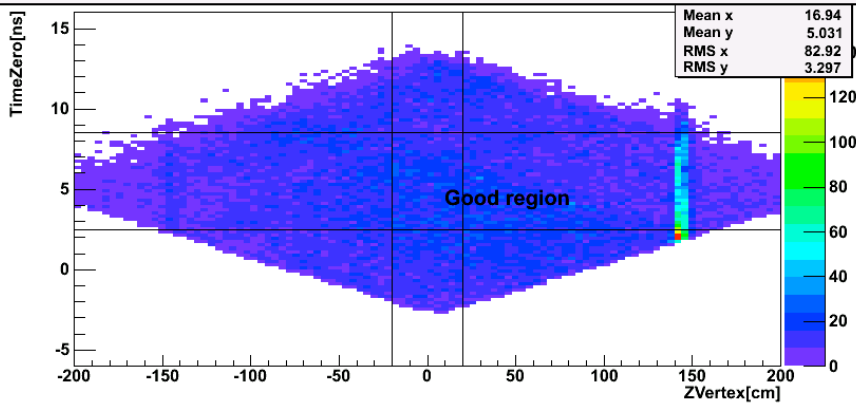
Z [Trigger]   Zbbc [BBLL1]   Zzdc [ZDCLL1wide]   Zbbc [BBCLL1(noVtx)]   Zbbc [BBCLL1(narrowVtx)]

(Scale Fac.) #Evt.   (1) 31766   (1) 213   (1) 83458   (0) 0  
 < All histograms are scaled by scaled factor >

Vertex Mean (RMS)   7.6cm ( 70.2 cm) -6.6cm ( 77.3 cm)   16.3cm ( 80.5 cm)   0cm ( 0 cm)

$\sigma_{ZDC} = 0.001$   $\epsilon_{BBC} = 0.001$    beam in acceptance  $\epsilon_{ZDC} = 0.314$    beam in acceptance  $\epsilon_{BBC} = 1.025$

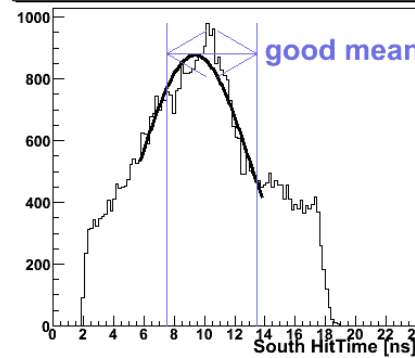
### TimeZero vs ZVertex



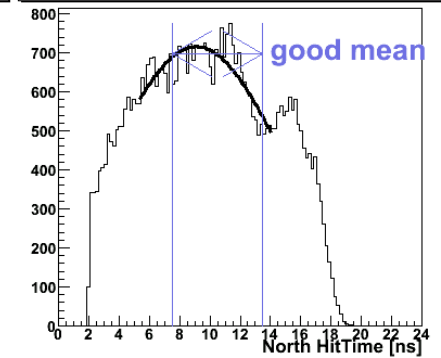
## BBC ONLINE MONITOR

Run #369194 Events: 85449 Date: Mon Apr 23 03:07:28 2012

### BBC South Hittime



### BBC North Hittime

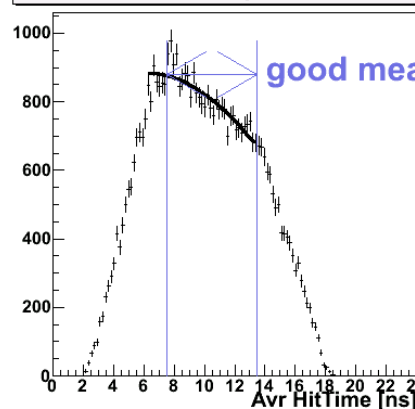


South: 9.3[ns] North: 9[ns] ... **OK**

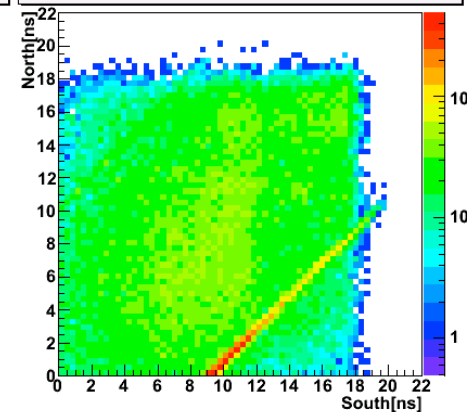
Global offset : **OK**

Shown data are triggered by BBLL1  $|z| < 130 \text{ cm}$

### BBC Average Hittime



### Arm-Hit-Time Correlation of North and South BBC

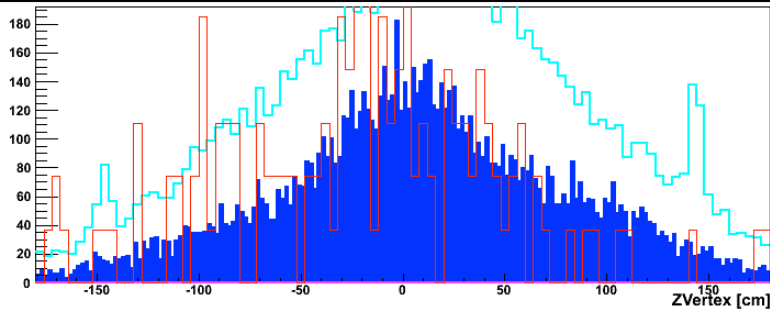


# VTX Distributions (Fill 16771, 2nd)

## BBC ONLINE MONITOR

Run #369200 Events: 31332 Date: Mon Apr 23 08:07:07 2012

Bbc ZVertex (south<-->north)



ZFit  
Z<sub>BLL1</sub> w/o Vtx = 9.7 cm ( $\sigma = 62$  cm) ... OK

Z [Trigger] Zbbc [BLL1] Zzdc [ZDLL1wide] Zbbc [BBCLL1(noVtx)] Zbbc [BBCLL1(narrowVtx)]

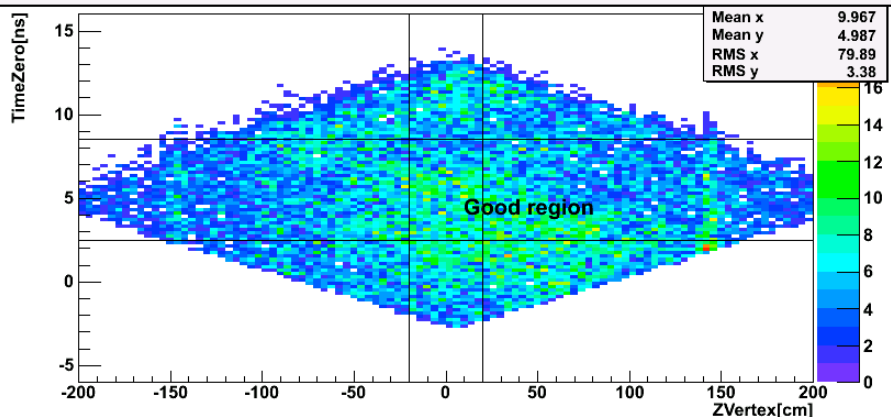
(Scale Fac.) #Evt. (1) 12715 (1) 159 (1) 30456 (0) 0

< All histograms are scaled by scaled factor >

Vertex Mean (RMS) 8cm (69.9 cm) -20.7cm (67.4 cm) 9.2cm (77.2 cm) 0cm (0 cm)

$\sigma_{ZDC} = 0.002$   $\epsilon_{BBC} = 0.003$  beam in acceptance ZDC = 0.416 beam in acceptance BBC = 1.021

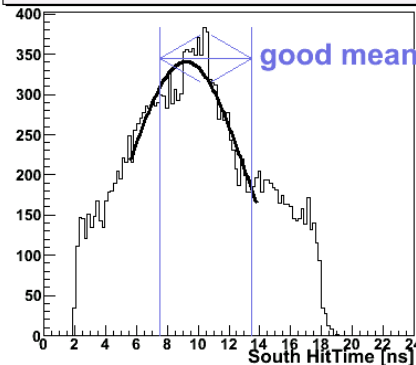
TimeZero vs ZVertex



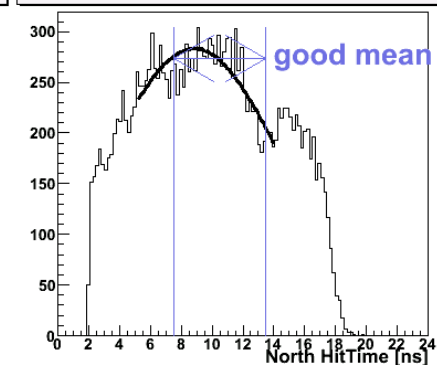
## BBC ONLINE MONITOR

Run #369200 Events: 31332 Date: Mon Apr 23 08:07:07 2012

BBC South Hittime



BBC North Hittime

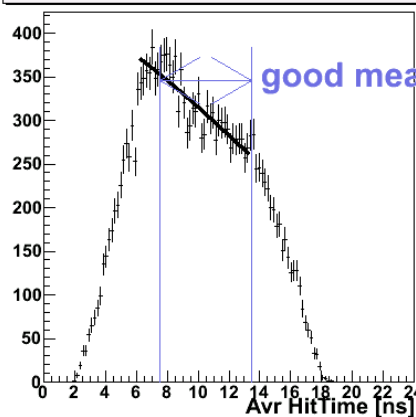


South:9.2[ns] North:8.8[ns] ... OK

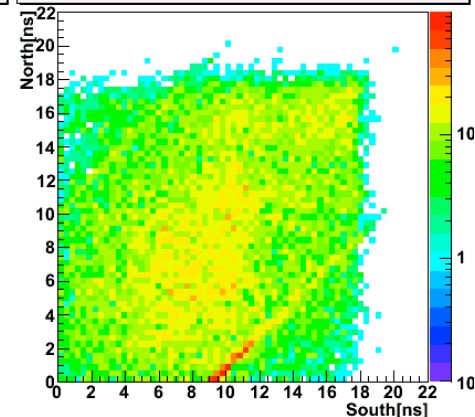
Global offset : OK

Shown data are triggered by BLL1  $|z| < 130$  cm

BBC Average Hittime



Arm-Hit-Time Correlation of North and South BBC

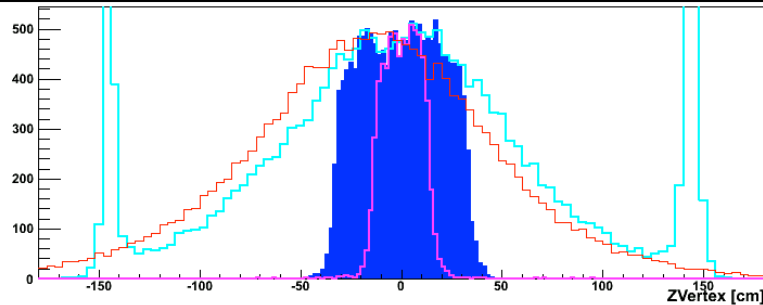


# VTX Distribution (Fill 16775, 3rd)

## BBC ONLINE MONITOR

Run #369328 Events: 85266 Date: Tue Apr 24 07:50:19 2012

### Bbc ZVertex (south<-->north)



Z<sub>Fit</sub>  
Z<sub>BBLL1 w/o Vtx</sub> = 0.4 cm ( $\sigma = 52$  cm) ... OK

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

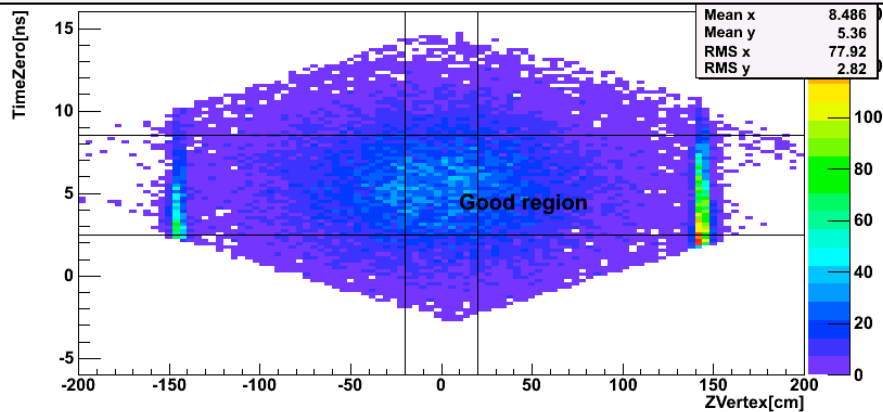
(Scale Fac.) #Evt. (1) 15852 (1) 67075 (1) 52381 (1) 6856

< All histograms are scaled by scaled factor >

Vertex Mean (RMS) 0.3cm (19.5cm) -14.3cm (60cm) 9.1cm (78.8cm) 0.6cm (9.3cm)

$\sigma_{ZDC} = 0.484$   $\epsilon_{BBC} = 1.066$  beam in acceptance = 0.180 beam in acceptance = 0.949  
ZDC BBC

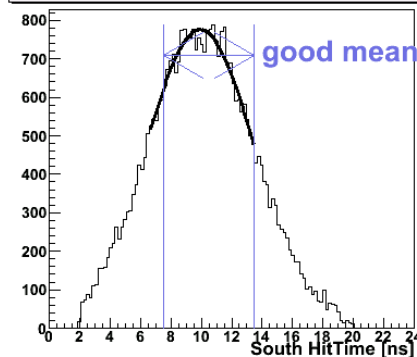
### TimeZero vs ZVertex



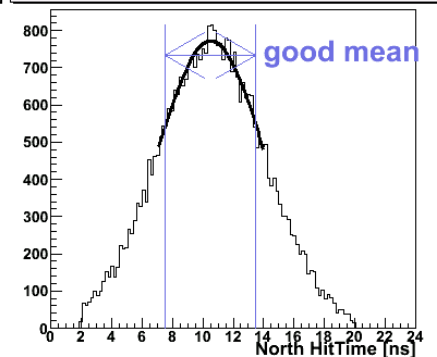
## BBC ONLINE MONITOR

Run #369328 Events: 85266 Date: Tue Apr 24 07:50:19 2012

### BBC South Hittime



### BBC North Hittime

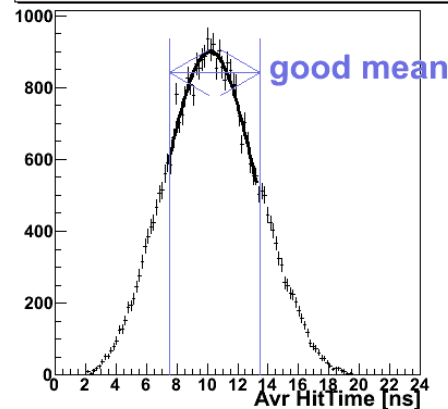


South: 9.9[ns] North: 10.5[ns] ... OK

Global offset : ... OK

Shown data are triggered by BBLL1  $|z| < 130$  cm

### BBC Average Hittime



### Arm-Hit-Time Correlation of North and South BBC

