

# PHENIX Run-15 Status

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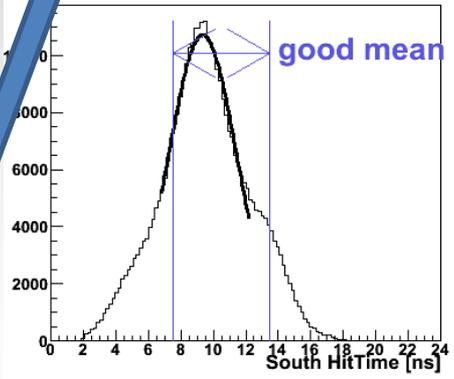
# Collisions

- Timed in the BBC
- Took data from all (but one) subsystems.

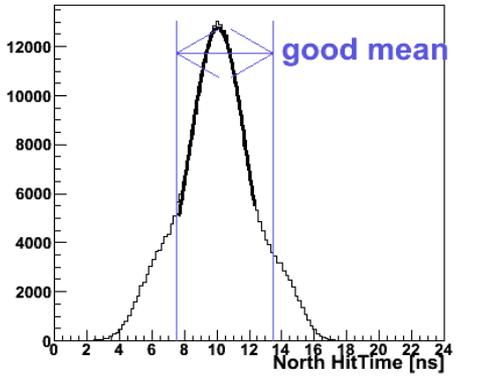
## BBC ONLINE MONITOR

Run #421348 Events: 473921 Date:Sun Feb 8 08:27:43 2015

### BBC South Hittime



### BBC North Hittime

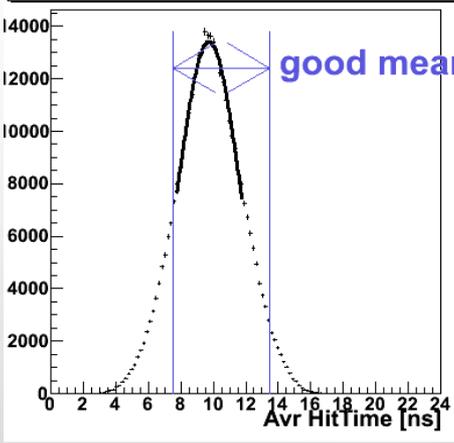


South:9.3[ns] North:10[ns] ... OK

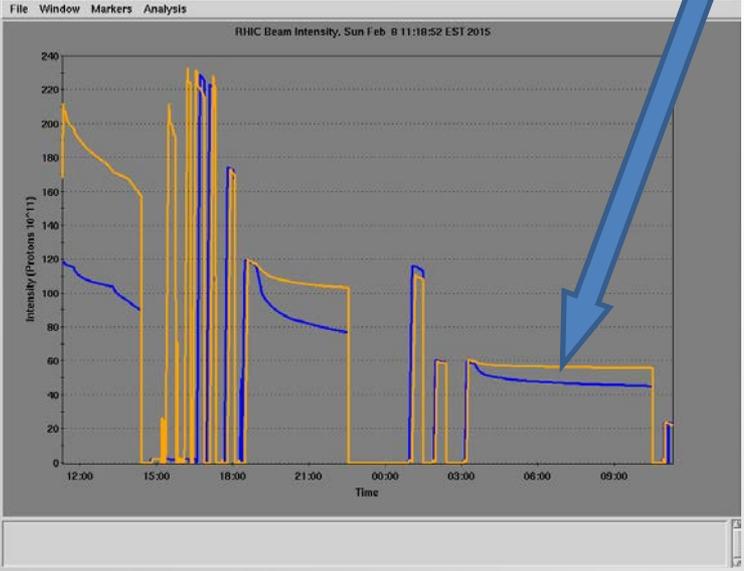
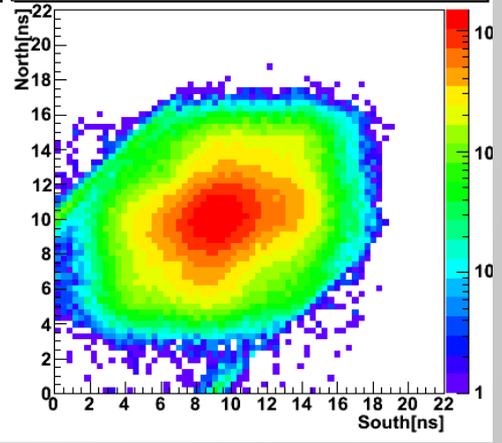
Global offset : OK

Shown data are triggered by BLLL1  $|z| < 130\text{cm}$

### BBC Average Hittime



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



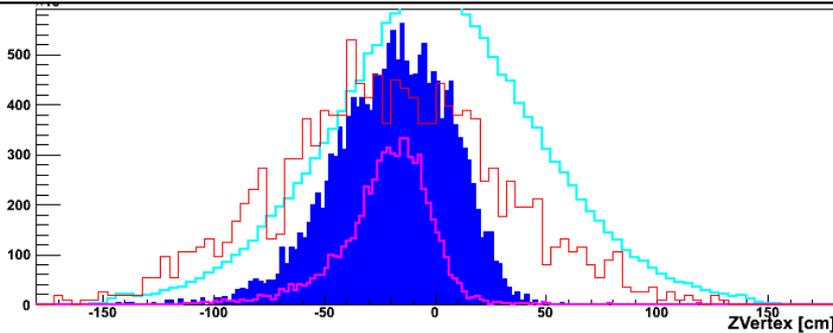
Time Meeting 2/10/2015



# BBC ONLINE MONITOR

Run #421348 Events: 473921 Date: Sun Feb 8 08:27:43 2015

Bbc ZVertex (south<-->north)



Z<sup>Fit</sup><sub>BLL1 w/o Vtx</sub> = -1 cm (σ = 42 cm) ... OK

Z [Trigger] Zbbc [BLL1] Zzdc [ZDCLL1wide] Zbbc [BBCLL1(noVtx)] Zbbc [BBCLL1(narr)

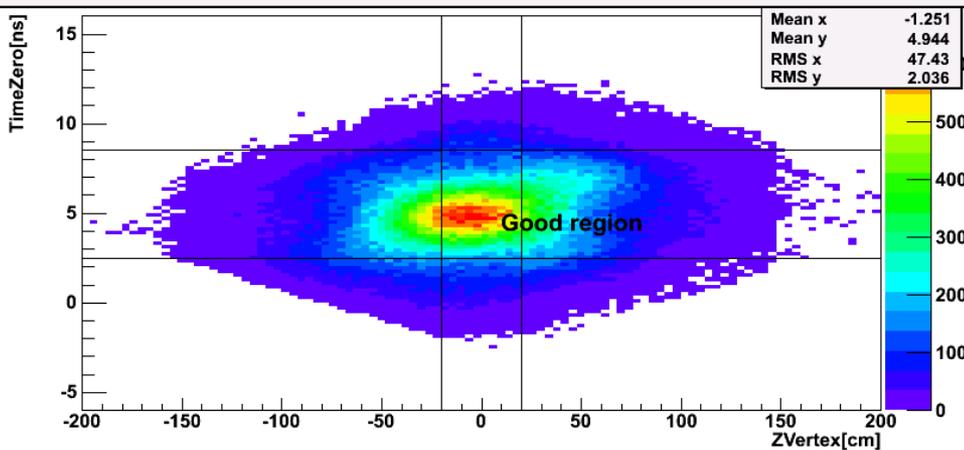
(Scale Fac.) #Evt. (2750) 6393 (98) 1529 (101) 460388 (1238) 5420

< All histograms are scaled by scaled factor >

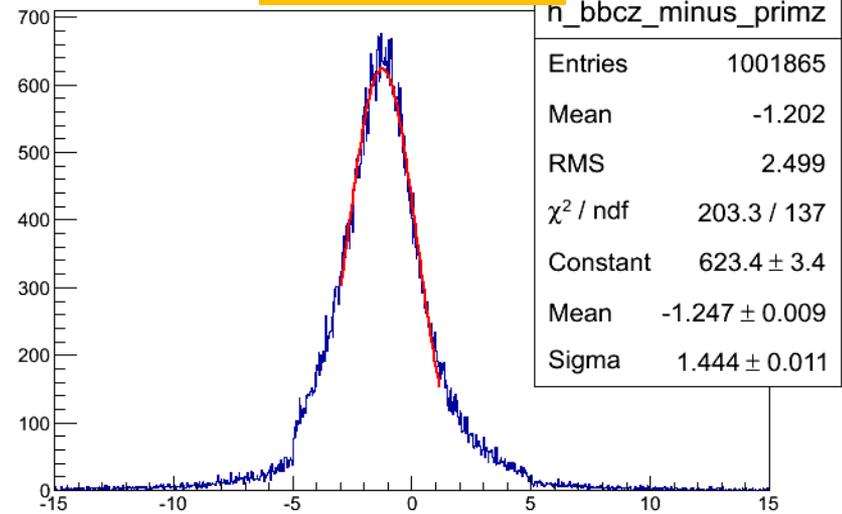
Vertex Mean (RMS) -19.4cm (26.7 cm) 21cm (49.8 cm) -0.6cm (47.8 cm) -22.1cm (20 cm)

σ<sub>ZDC</sub> = 0.000 ε<sub>BBC</sub> = 0.000 beam in acceptance<sub>ZDC</sub> = 0.253 beam in acceptance<sub>BBC</sub> = 0.978

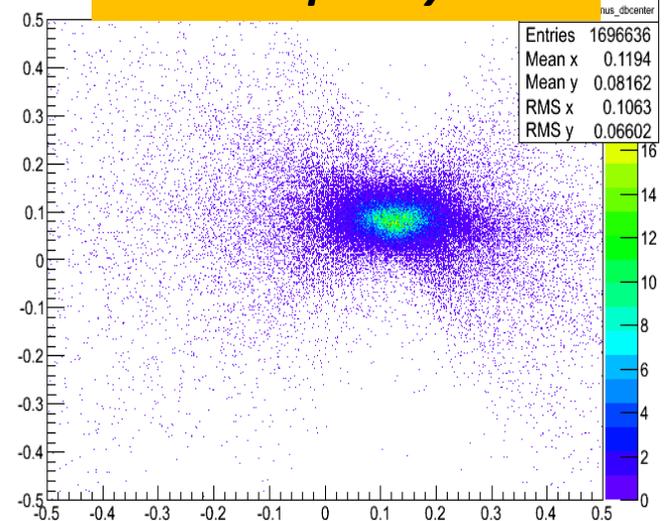
TimeZero vs ZVertex



# BBCZ-VTX

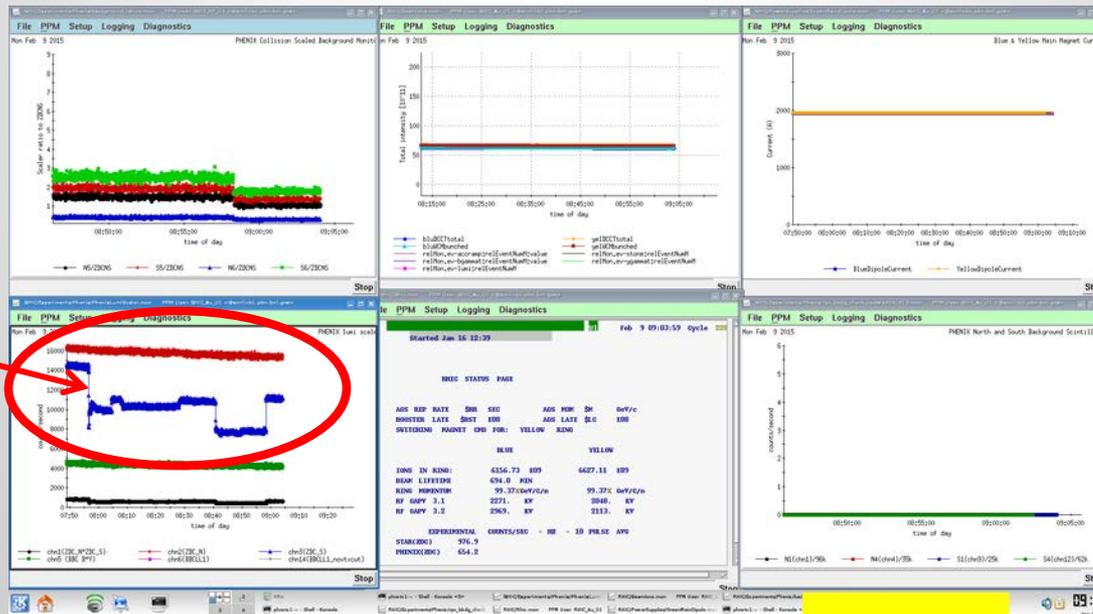


# Beam Spot by VTX

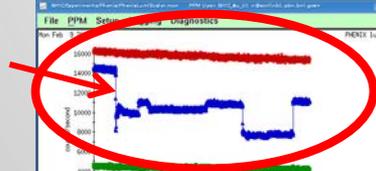


# ZDC Issues

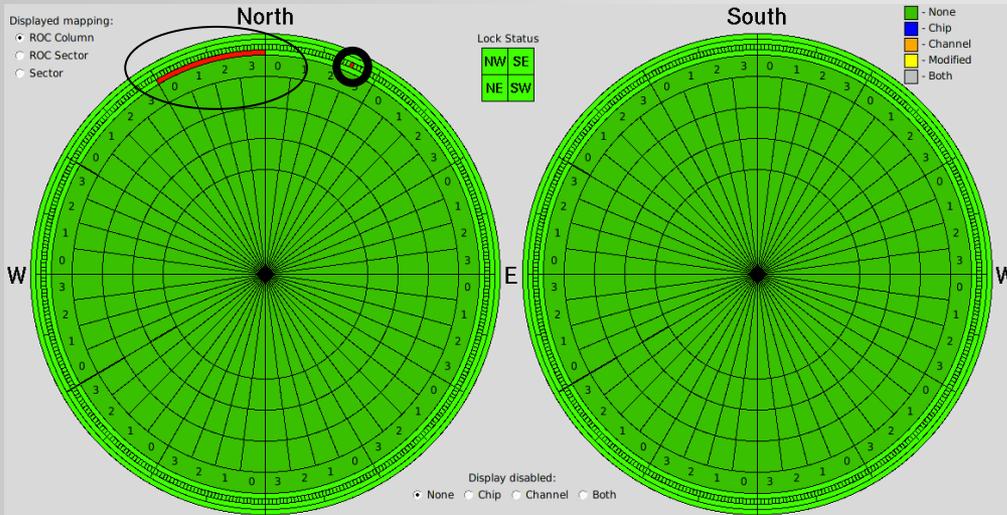
- MCR (Angelika) reported that the ZDC rates were a factor  $\sim 2$  lower than previous 200GeV p+p runs.
- Gain was too low, have raised by x1.5.
- Also saw ZDC rates fluctuate – not understood.



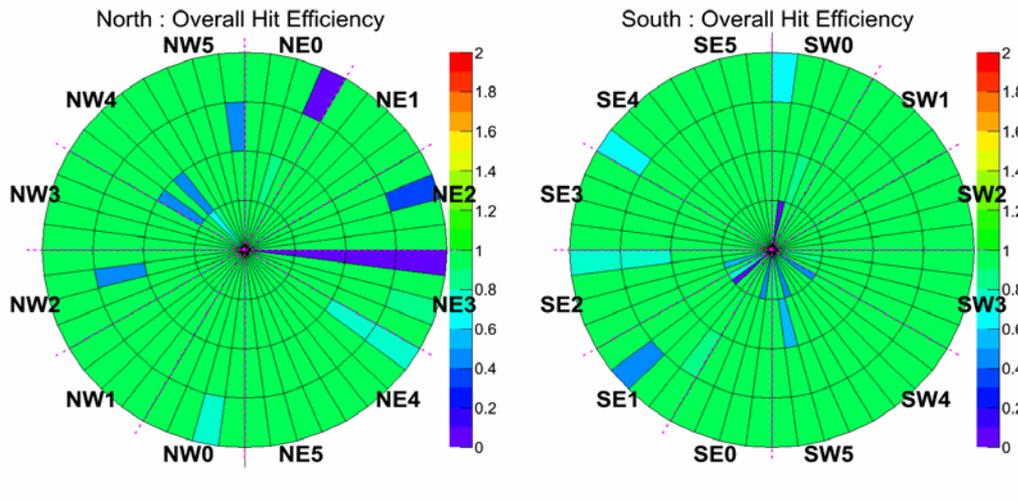
ZDC S singles



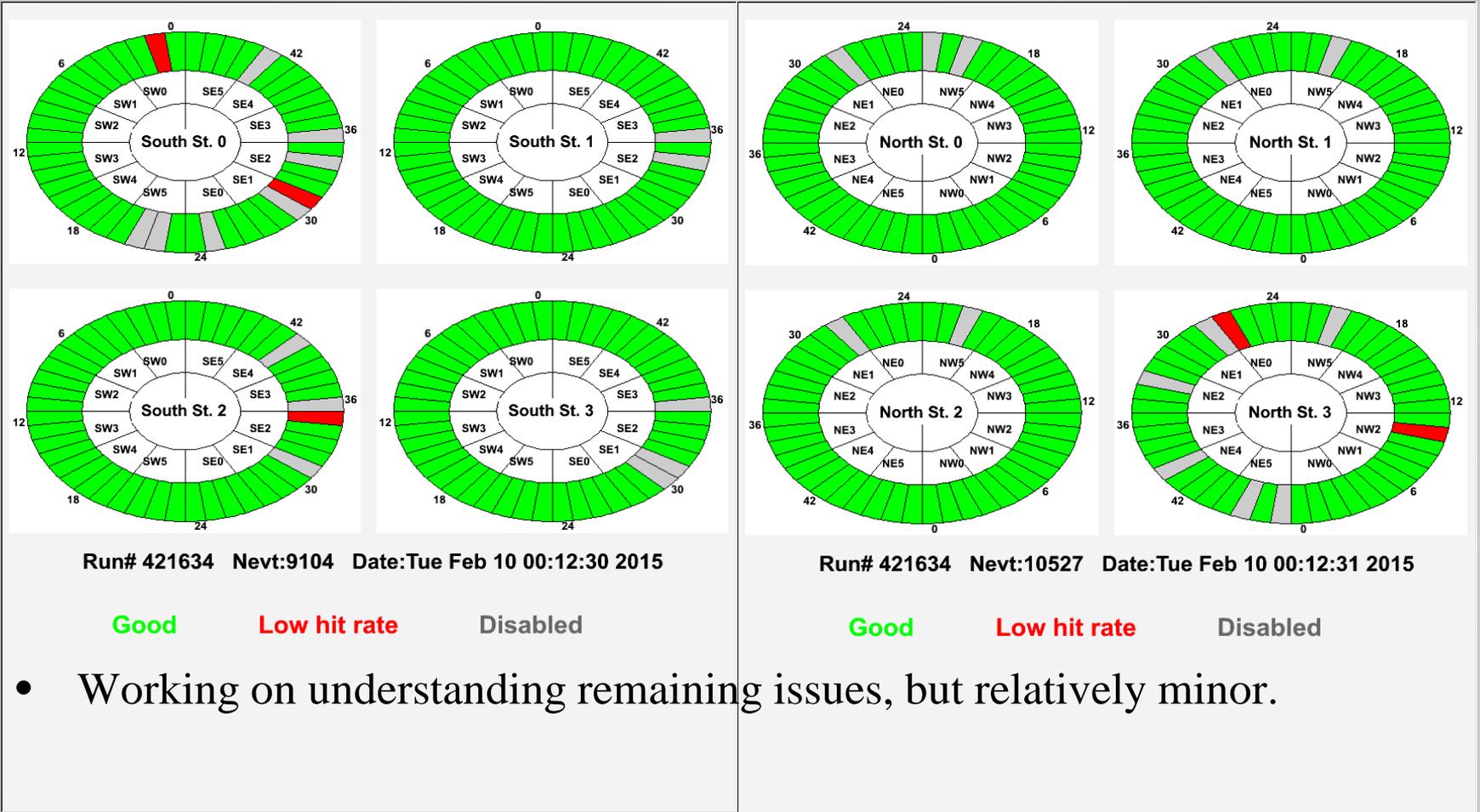
# FVTX Status



- All fibers have sync, but NW5 because of a broken transceiver (top figure).
- Only 1 / 768 columns does not latch (top figure).
- No bias problems at this moment.
- Overall 95% hit efficiency according to the last calibration (bottom figure).
- Have ~7 wedges which do not properly receive a calibration signal but still perform fine for real data taking.



# FVTX from last night's data



# VTX Pixel Status

**Chip Map of *WEST* (Commissioning in Run-15 2015/1/16)**  
***Pulse Test (sent pulse to col10 and 20)***



LADDER	SPIRO	WEST		South								North								SPIRO
				15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	
8	49	Barrel 0	B0-L4	Good Chip																58
10	51		B0-L3	Good Chip																59
5	71		B0-L2	Good Chip																27
36	48		B0-L1	Good Chip																28
17	47		B0-L0	Good Chip																29

34	37	Barrel 1	B1-L9	Good Chip																30
15	31		B1-L8	100% Dead	Good Chip															16
35	38		B1-L7	Good Chip																78
32	46		B1-L6	No Data																17
40	39		B1-L5	Good Chip																61
13	53		B1-L4	Good Chip																18
11	40		B1-L3	Good Chip																56
16	55		B1-L2	Good Chip																20
6	41		B1-L1	100% Dead	50% Dead	100% Dead	Good Chip										50% Dead	57		
20	60		B1-L0	100% Dead	100% Dead	Good Chip										100% Dead	50% Dead	67		

Col#0 is always hot for two chips. Cannot mask.

↑ (2015/01/16)

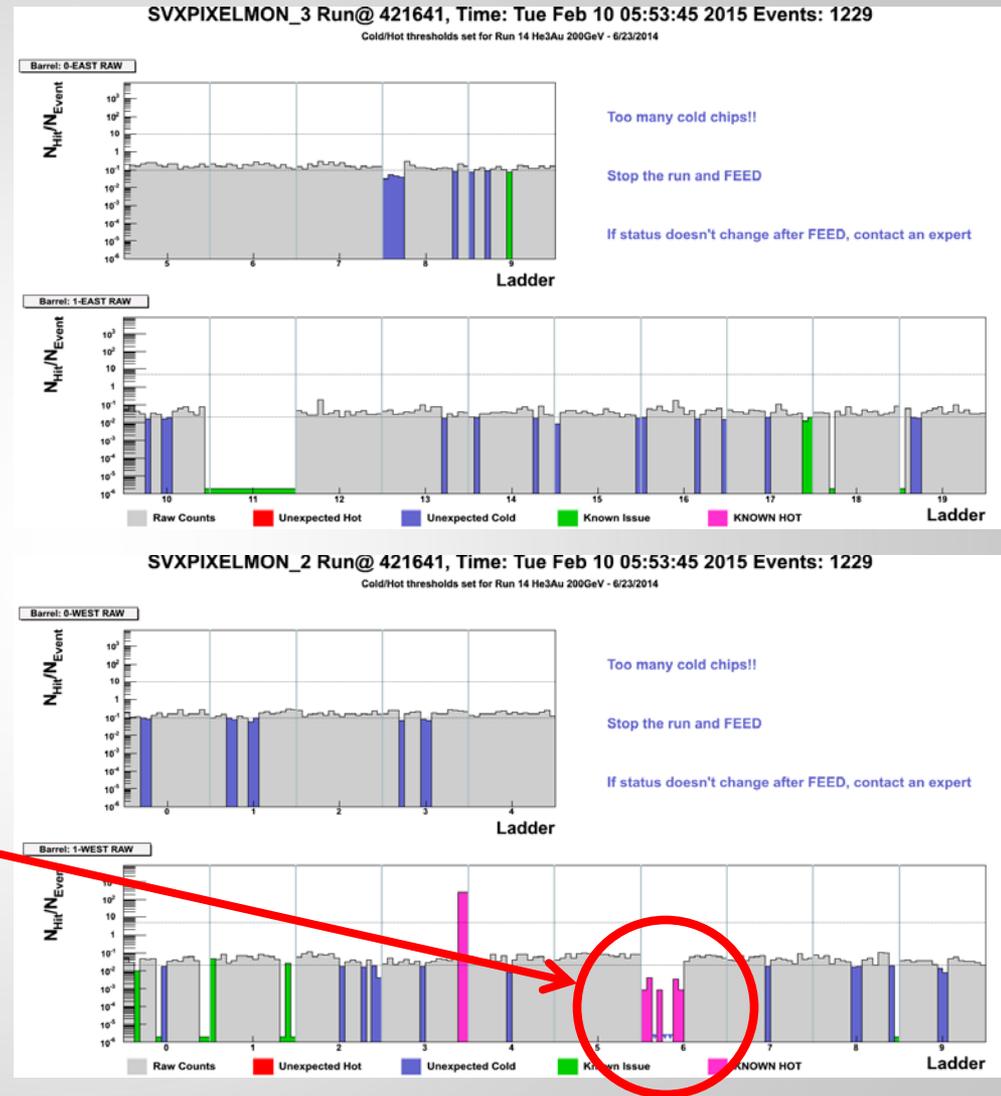
Good chip -> 50% Dead

**New Problem – B1-L6 has lost communication, no data from this ladder**



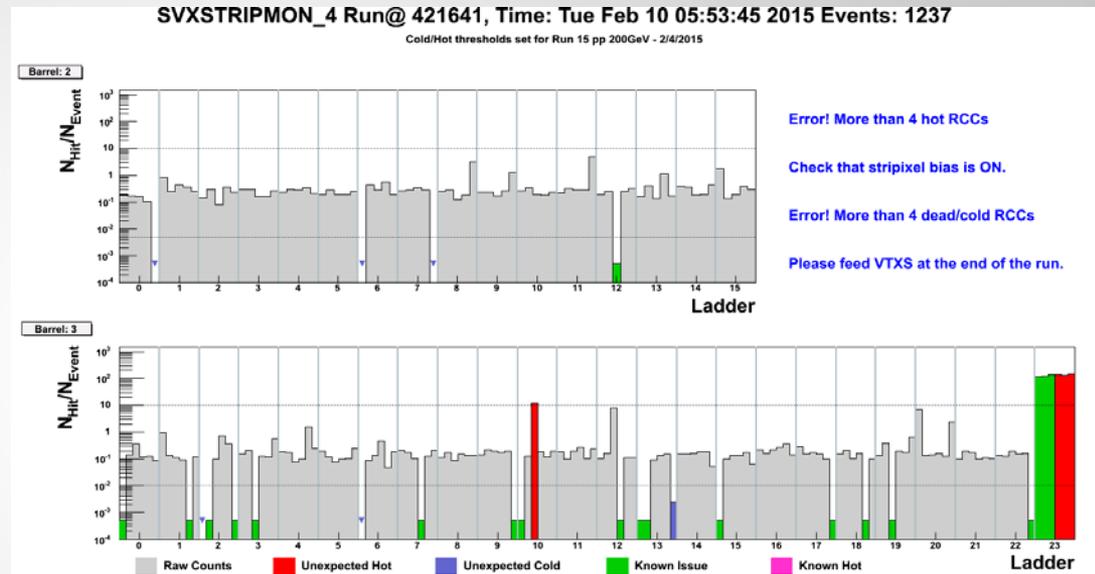
# VTX Pixel from last night's data

- Number of hits per event mostly what we expect.
- The new missing ladder.



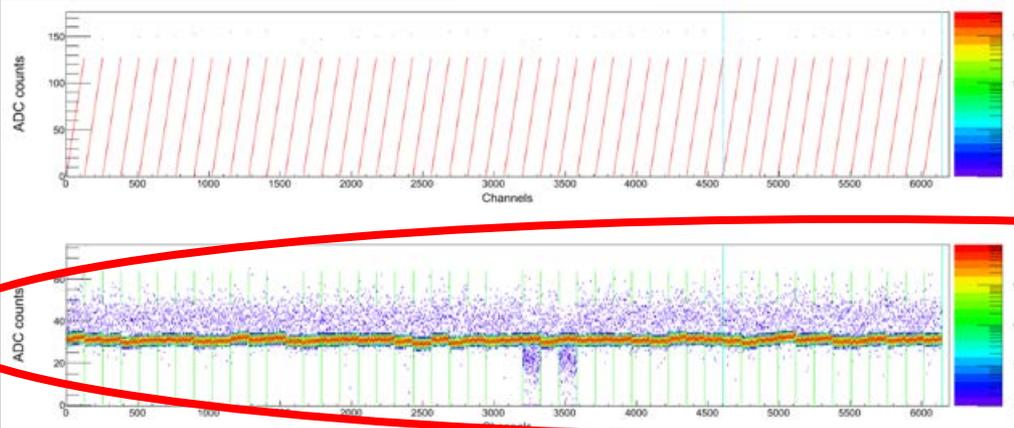
# VTX Stripixel from last night's data

- Number of hits per event mostly what we expect.



# MPC-EX

- Both North & South are setup for PHENIX
- All Layers are being read out by DCMs
  - Still in standalone mode while firmware is being tested
  - Entire readout chain tested
    - GTM->FEM->Detector->FEM->DCM
- Working on multi-event buffering: critical to high-rate, low dead time PHENIX DAQ
  - Some issues, but a lot of progress over the past few weeks



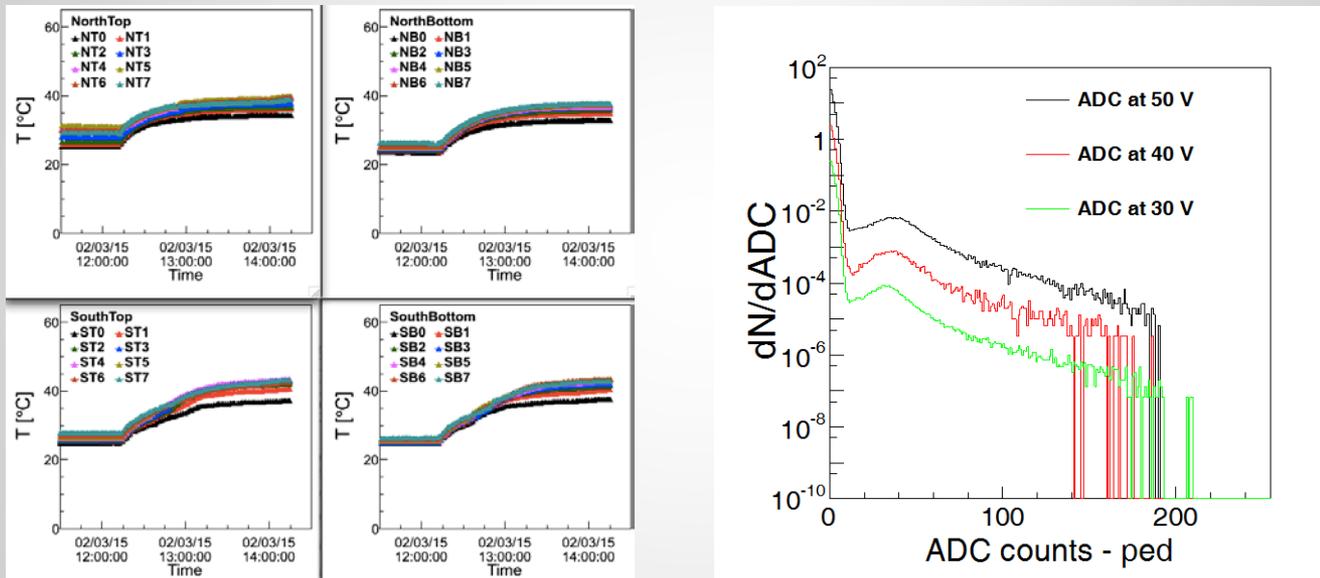
Fake data from the Carrier Board  
- Tests the connection to the FEM

**Have (today) read some real data from SVX4s!**



# Detector performance

- Temperature & leakage current monitoring
  - Leakage current increases with temperature



- Cosmic MIP studies are ongoing at SBU
  - Calibration possibilities



# Summary

- BBC is timed in.
- All existing detectors behaving as usual.
- MPC-EX is beginning to read real data into PHENIX DAQ.
- One new ladder in VTXP not reading out.
- ZDC issue to be resolved.

