

PHENIX Run-15 Status

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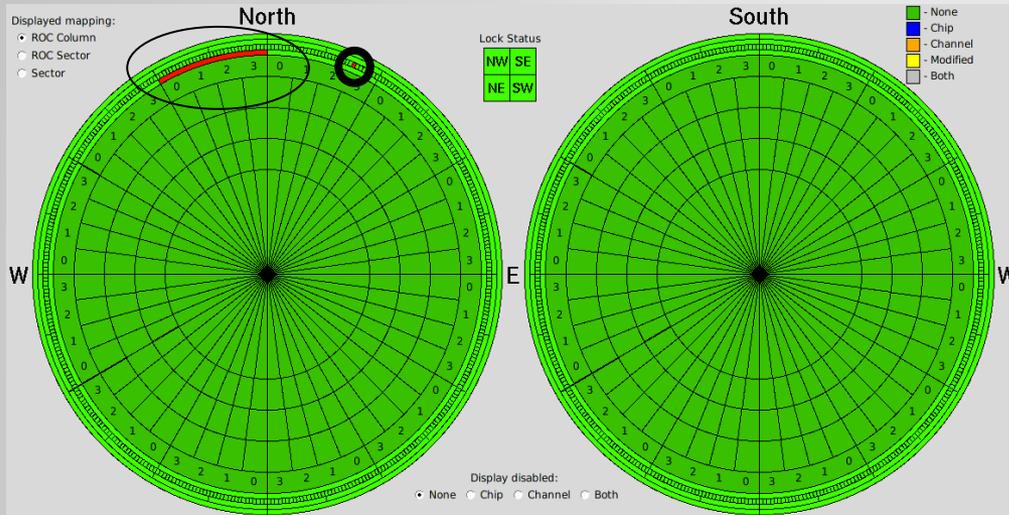


Status of Preparations

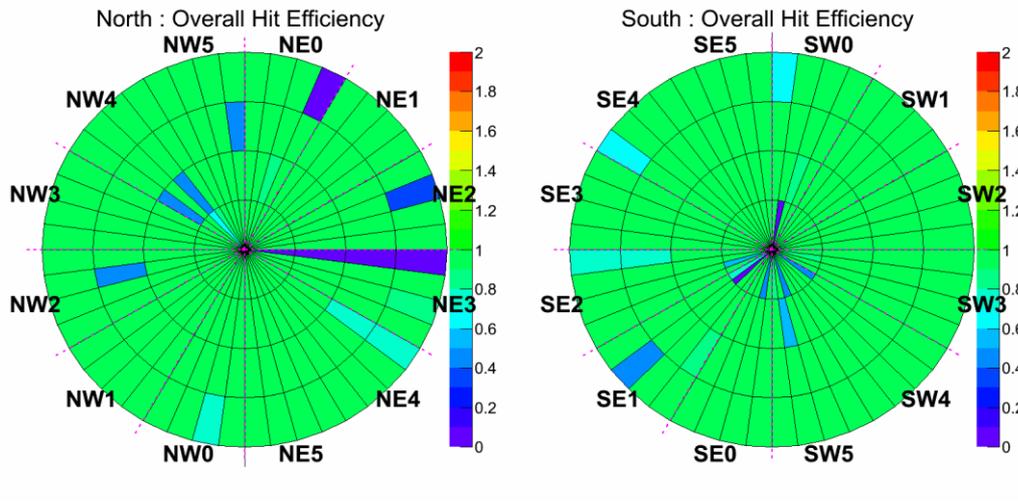
- PHENIX is (mostly) ready for Run 15 start of physics.
- We are under full shifts.
- MPC-EX North and South integration ongoing.
- FVTX/VTX are in good shape.



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.



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	Green																58
10	51		B0-L3	Green																59
5	71		B0-L2	Green																27
36	48		B0-L1	Green																28
17	47		B0-L0	Green																29

34	37	Barrel 1	B1-L9	Green																30
15	31		B1-L8	Red	Green															16
35	38		B1-L7	Green																78
32	46		B1-L6	Green																17
40	39		B1-L5	Green																61
13	53		B1-L4	Green																18
11	40		B1-L3	Green																56
16	55		B1-L2	Green																20
6	41		B1-L1	Red	Yellow	Red	Green										Yellow	57		
20	60		B1-L0	Red	Red	Green								Red	Green				Yellow	67

↑ (2015/01/16)

Col#0 is always hot for two chips. Cannot mask. Good chip -> 50% Dead
No change from a test at Physics Lab except for 1 chip (B1-L0 chip#2).



VTX Pixel Status

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



LADDER	SPIRO	EAST		North								South								SPIRO
				15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	
25	12	Barrel 0	B0-L5	Good Chip																72
39	13		B0-L6	Good Chip																73
9	14		B0-L7	Good Chip																74
23	69		B0-L8	Good Chip																76
19	68		B0-L9	Good Chip															50% Dead Chip	77

29	32	Barrel 1	B1-L10	100% Dead Chip	Good Chip															21
30	54		B1-L11	100% Dead Chip																62
33	33		B1-L12	Good Chip																22
31	52		B1-L13	Good Chip																63
22	70		B1-L14	Good Chip																24
27	50		B1-L15	Good Chip																64
12	35		B1-L16	Good Chip																25
26	43		B1-L17	50% Dead Chip	100% Dead Chip	Good Chip														65
14	36		B1-L18	Good Chip															100% Dead Chip	26
21	42		B1-L19	Good Chip															100% Dead Chip	66

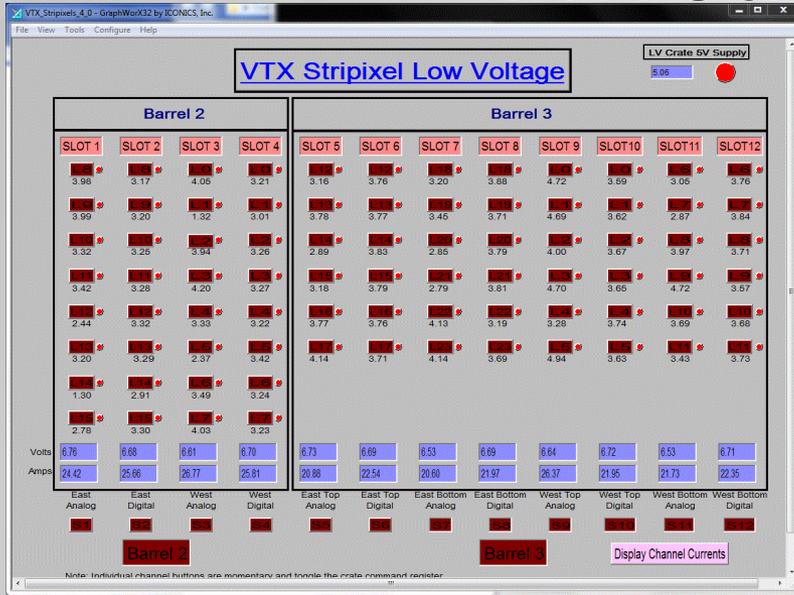
Good chip -> 50% Dead

(2015/01/16)

No change from a test at Physics Lab except for 2 chips (B0-L9 chip#7 and B1-L17 chip#14).



VTX Stripixel Status



1) - Inspected cables connections, LV, HV, optical cables. Issues were found and fixed

2) Low Voltage (LV) turned ON: all (40) ladders responded properly to low voltage (all working).

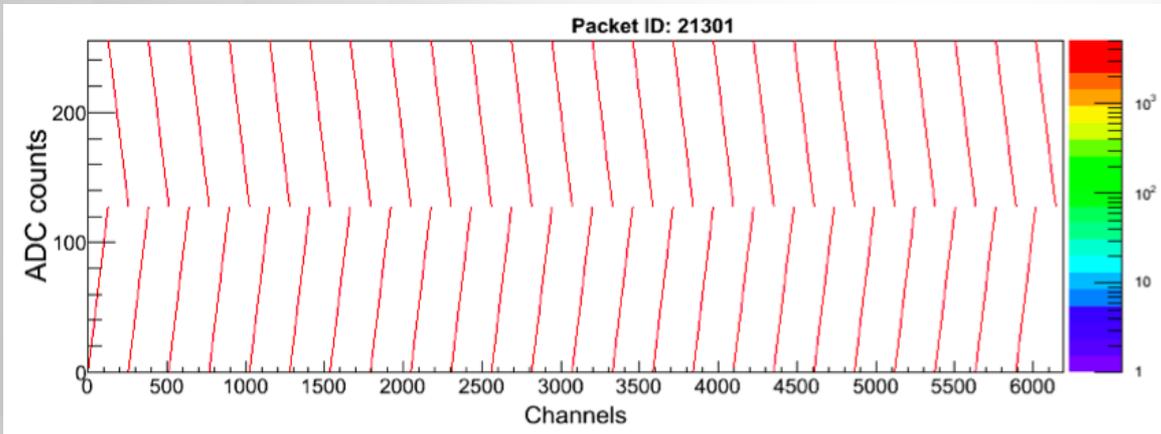
3) Bias voltage turned ON (10 volts, to check the connections): all (40) ladders responded properly with nominal currents.

Expert Watch Mode
Watch
VTX-Stripixel HV Control
All Channels On/Off: On-40 On-0
Fri Jan 16 16:58:17 EST 2015

VTX-Stripixel WEST										VTX-Stripixel EAST									
Channel	On/Off	Demand Volt.(V)	Measur. Volt.(V)	Volt. Trend	Current Limit(uA)	Measur. Curr.(uA)	Curr. Trend	Status	Age	Channel	On/Off	Demand Volt.(V)	Measur. Volt.(V)	Volt. Trend	Current Limit(uA)	Measur. Curr.(uA)	Curr. Trend	Status	Age
B2-L0	On	10.00	9.99	Trend	300	29.2	Trend	Ok	0	B2-L8	On	10.00	10.00	Trend	300	15.6	Trend	Ok	0
B2-L1	On	10.00	9.99	Trend	300	26.8	Trend	Ok	0	B2-L9	On	10.00	10.01	Trend	500	13	Trend	Ok	0
B2-L2	On	10.00	10.00	Trend	999	26.1	Trend	Ok	0	B2-L10	On	10.00	10.01	Trend	300	16.6	Trend	Ok	0
B2-L3	On	10.00	10.02	Trend	300	15.2	Trend	Ok	0	B2-L11	On	10.00	10.01	Trend	300	17.4	Trend	Ok	0
B2-L4	On	10.00	10.00	Trend	300	30.6	Trend	Ok	0	B2-L12	On	10.00	10.00	Trend	300	16.7	Trend	Ok	0
B2-L5	On	10.00	10.00	Trend	300	31.6	Trend	Ok	0	B2-L13	On	10.00	10.00	Trend	300	14.3	Trend	Ok	0
B2-L6	On	10.00	10.01	Trend	999	25.5	Trend	Ok	0	B2-L14	On	10.00	9.99	Trend	300	13.6	Trend	Ok	0
B2-L7	On	10.00	9.99	Trend	300	22.5	Trend	Ok	0	B2-L15	On	10.00	10.02	Trend	300	14.1	Trend	Ok	0
B3-L0	On	10.00	10.01	Trend	999	33.1	Trend	Ok	0	B3-L12	On	10.00	10.00	Trend	300	17.6	Trend	Ok	0
B3-L1	On	10.00	9.98	Trend	300	27	Trend	Ok	0	B3-L13	On	10.00	10.01	Trend	999	17.2	Trend	Ok	0
B3-L2	On	10.00	10.00	Trend	300	31.6	Trend	Ok	0	B3-L14	On	10.00	10.00	Trend	999	19.4	Trend	Ok	0
B3-L3	On	10.00	10.00	Trend	300	34.6	Trend	Ok	0	B3-L15	On	10.00	9.99	Trend	999	18.8	Trend	Ok	0
B3-L4	On	10.00	10.01	Trend	300	34.7	Trend	Ok	0	B3-L16	On	10.00	9.99	Trend	300	23.3	Trend	Ok	0
B3-L5	On	10.00	9.99	Trend	300	33.5	Trend	Ok	0	B3-L17	On	10.00	10.00	Trend	300	22.1	Trend	Ok	0
B3-L6	On	10.00	10.00	Trend	300	29.8	Trend	Ok	0	B3-L18	On	10.00	10.01	Trend	300	19	Trend	Ok	0
B3-L7	On	10.00	9.99	Trend	300	34.8	Trend	Ok	0	B3-L19	On	10.00	10.00	Trend	999	12.5	Trend	Ok	0
B3-L8	On	10.00	10.00	Trend	300	32.8	Trend	Ok	0	B3-L20	On	10.00	10.00	Trend	300	21.8	Trend	Ok	0
B3-L9	On	10.00	10.00	Trend	900	24.4	Trend	Ok	0	B3-L21	On	10.00	10.01	Trend	300	21	Trend	Ok	0
B3-L10	On	10.00	9.99	Trend	300	20.1	Trend	Ok	0	B3-L22	On	10.00	10.00	Trend	300	15.1	Trend	Ok	0
B3-L11	On	10.00	10.01	Trend	300	39.2	Trend	Ok	0	B3-L23	On	10.00	9.99	Trend	999	24.8	Trend	Ok	0

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

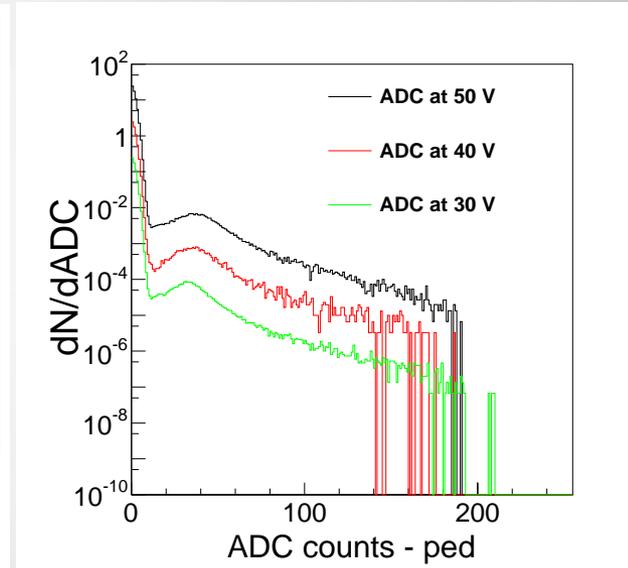
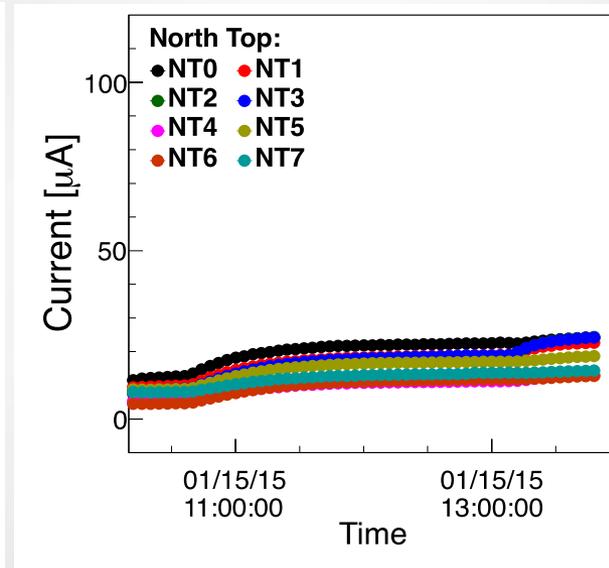
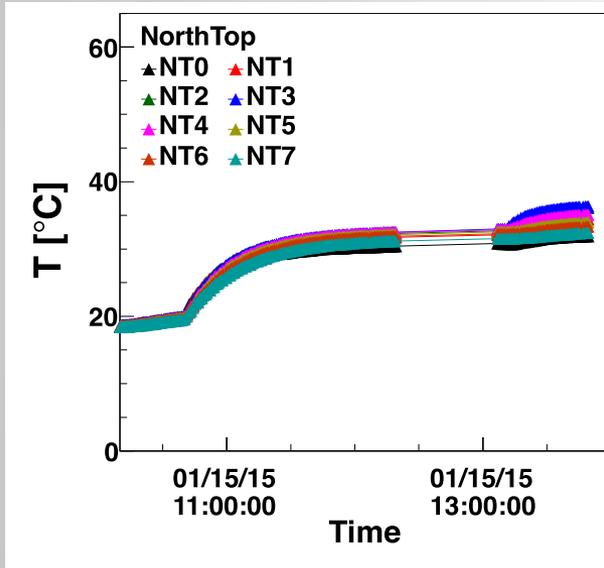


Fake data from the Carrier Board
- Tests the connection to the FEM



Detector performance

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



- Cosmic MIP studies are ongoing at SBU
 - Calibration possibilities



Summary

- We are quickly coming to a ready state.
- Still plan to be ready to take physics data and commission MPCEX on Feb. 9.

