PHENIX Run16 status
time meetting 02/16/2016

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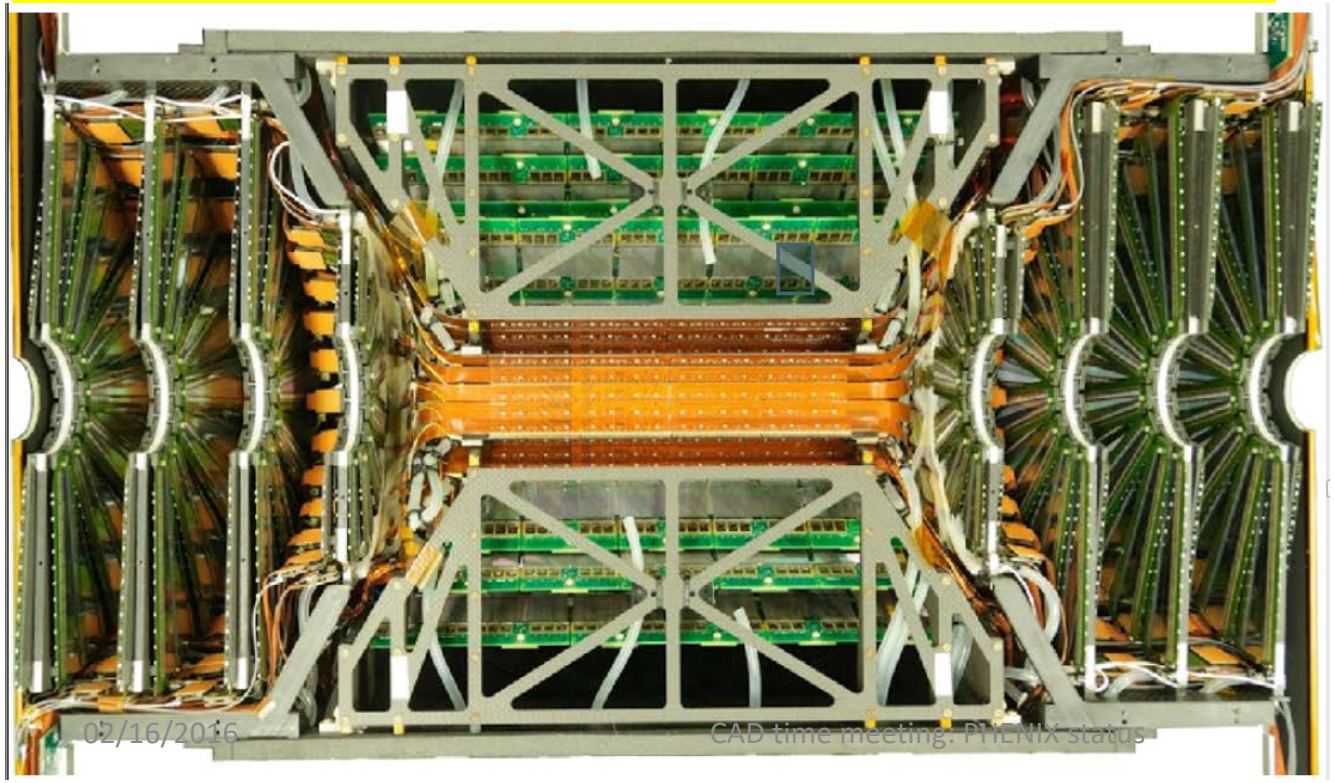
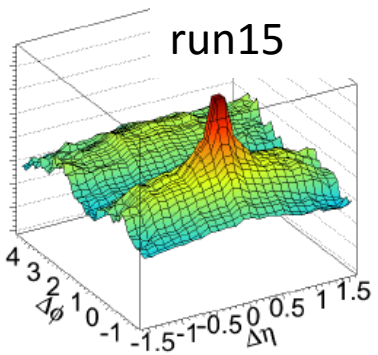
A very important requirement for collisions : |z|<10cm

- In the **|Z|<10cm** vertex: **> 7KHz up to end of store**
  - + high average luminosity



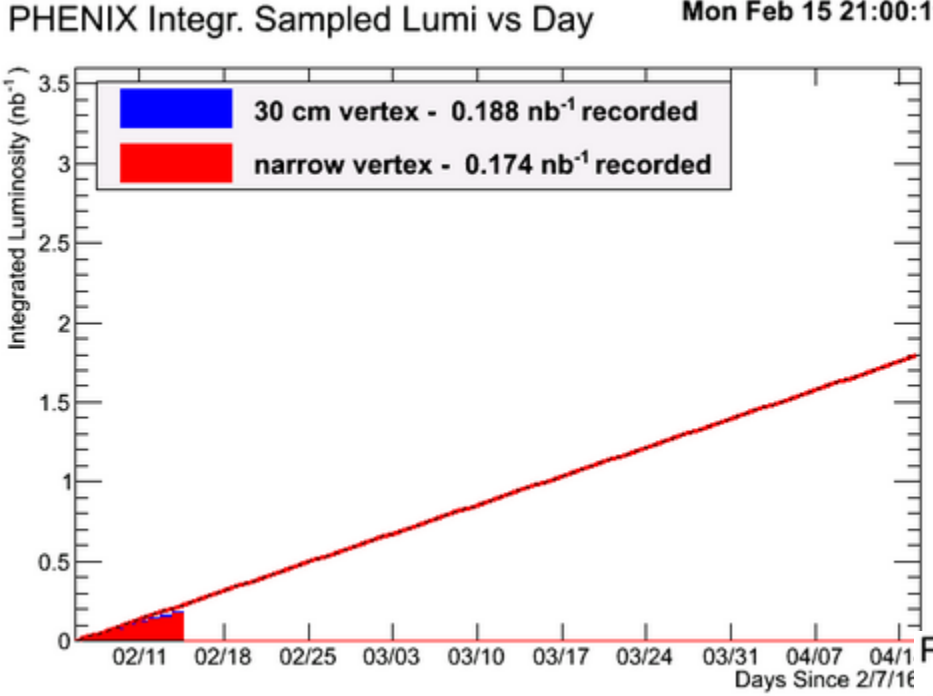
The extended coverage brings new performances in d-Au:
for instance the event plane

He-Au
run15



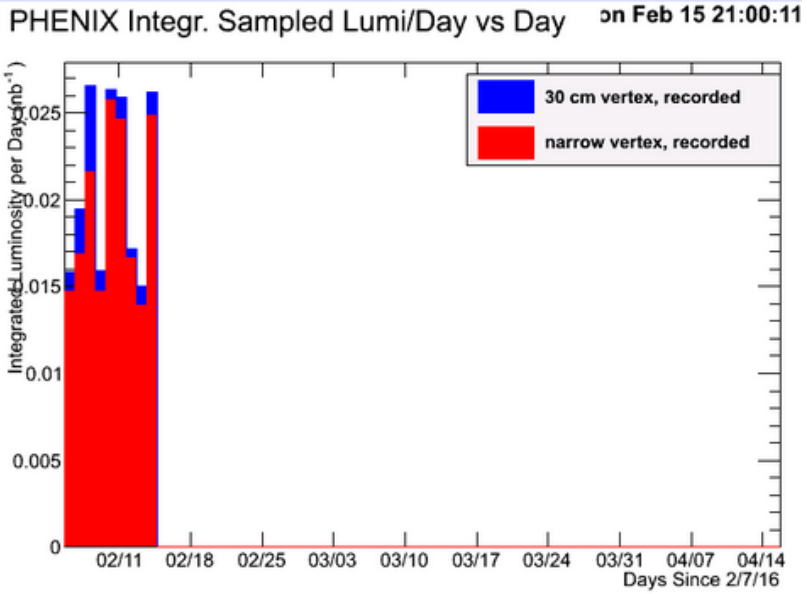
Calendar

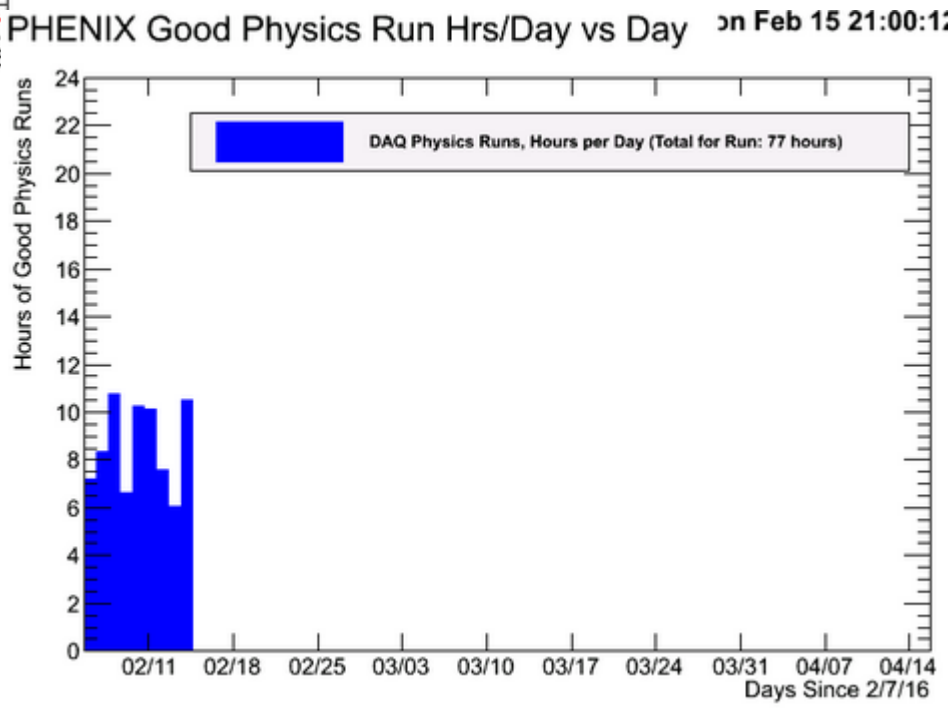
- Watch shifts started 12 January
- Detector closed 29 January
- timing with collisions started 5 february,
- Recording physics run since 6 february midnight Efficiency improving. Still 10% to gain in data flow.
- Maintenance day: drift chamber (noise), VTXSP..
- AuAu: goal >7KHz “narrowvertex” at end of store
- End of 10 weeks AuAu **to be precised**
- Then **5 weeks** d-Au,
- (then CeC)

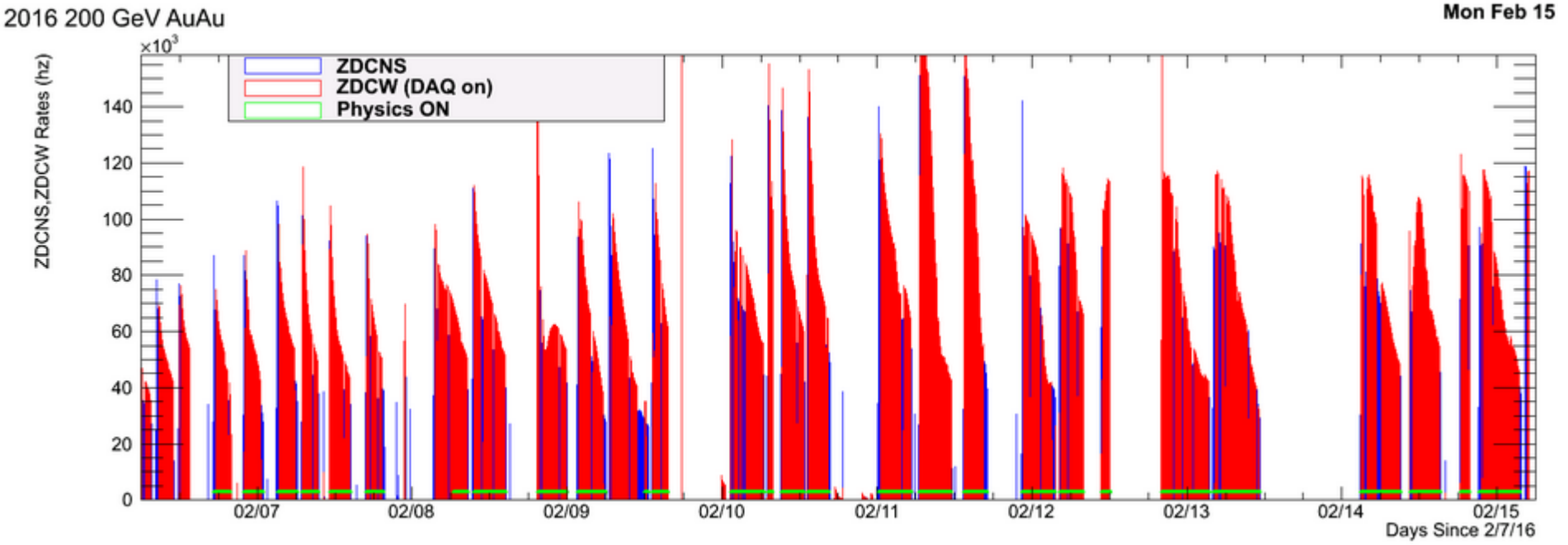


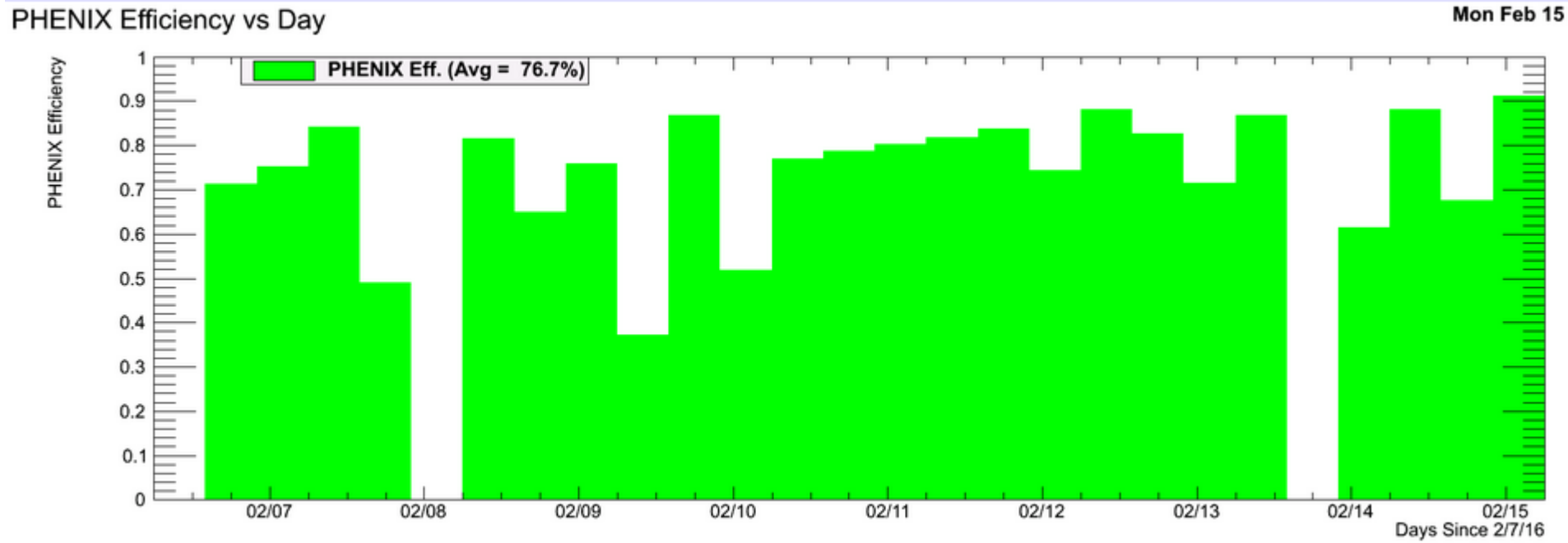
Goal: 1.8nb-1,
12 billions narrowvertex events

Slightly below the goal

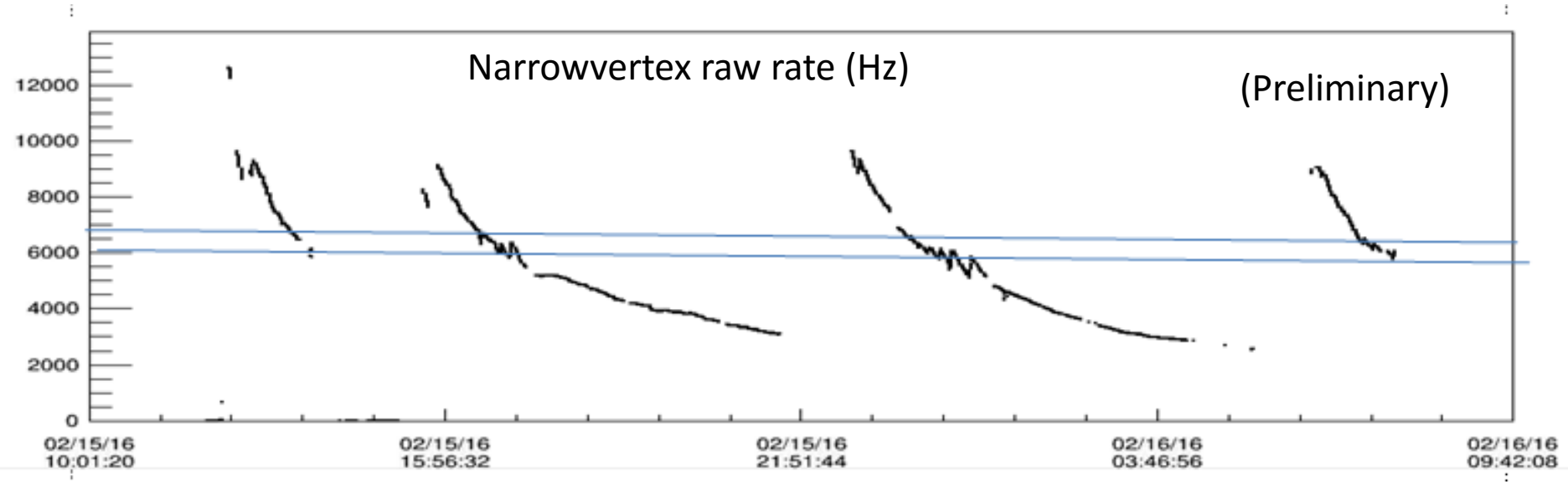


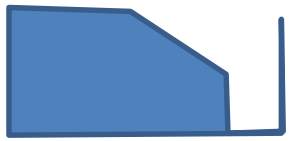



2016 200 GeV AuAu
Mon Feb 15
ZDCNS,ZDCW Rates (hz)
×10³
ZDCNS
ZDCW (DAQ on)
Physics ON
0
20
40
60
80
100
120
140
02/07
02/08
02/09
02/10
02/11
02/12
02/13
02/14
02/15
Days Since 2/7/16


PHENIX Efficiency vs Day
Mon Feb 15
PHENIX Efficiency
PHENIX Eff. (Avg = 76.7%)
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1
02/07
02/08
02/09
02/10
02/11
02/12
02/13
02/14
02/15
Days Since 2/7/16

10% remain to gain on our daq flow but we could already take more luminosity at end of store





Summary

- Taking data (sorry for the HV PS problem this morning)
- Efficiency improving (but good)
- Integrated luminosity slightly below the goal
- Can accept more luminosity at the end of store

Backup

d-Au : 5 weeks, 4 energies

- **“Five to seven weeks** of running to perform a small system beam energy scan (PAC) »

Our optimized choice for **5 weeks**:

- 20 GeV 1.5 week 9M (BUP: 7M)
- 39 GeV 1.5 week 110M (110M)
- 62 GeV 1. week 160M (230M)
- 200 GeV 1. week 1.6 B (2.4B)

Allowing a complete energy scan in the same detection conditions, and keeping BUP and PAC goals of measuring the **excitation function** of 2-particle **correlations** and **V2**, and possibly - the first **BES** measurement of **V3 in small systems** at RHIC.

D-Au BES: some extracts from the PAC June 2015:

In "2.2 Discussion of run 16 priorities:"

"2.2.2 Five to seven weeks of running to perform a small system beam energy scan: »

- ….« These measurements capitalize on the **unique and impressive versatility of the RHIC accelerator in providing a variety of collisions systems and energies."**
- … "**One of the hottest topics** in heavy ion physics in the past few years is the observed similarity between the behavior of many observables for p+p, p+A, d+A, 3He+A, and A+A, which poses the fundamental question of how small a system can exhibit thermalized QCD behavior. What is the smallest possible droplet of QGP, and how does the answer to this question depend on the collision energy and event multiplicity, which is to say on the temperature of the QGP in question? Addressing this newly opened, and challenging, question promises to deepen our understanding of, for example, which requirements have to be fulfilled for hydrodynamics to be applicable. »