

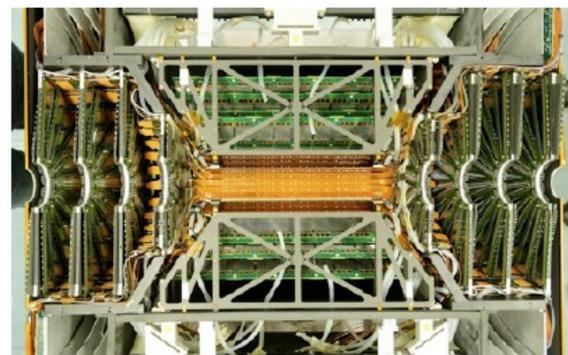
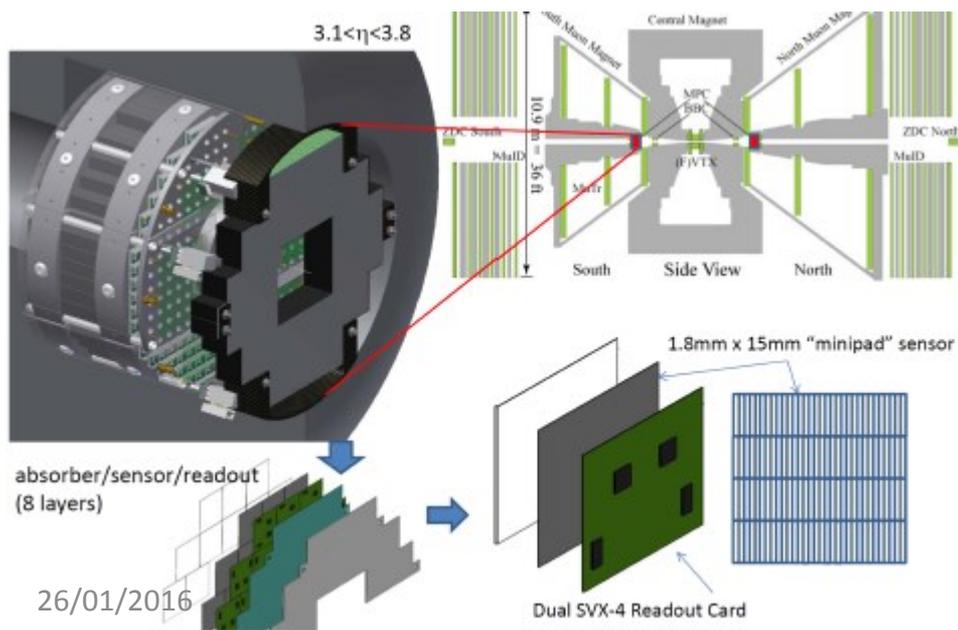
# **PHENIX Status**

## Time meeting 01/26/2016

Denis Jouan  
PHENIX Run Coordinator

# Context

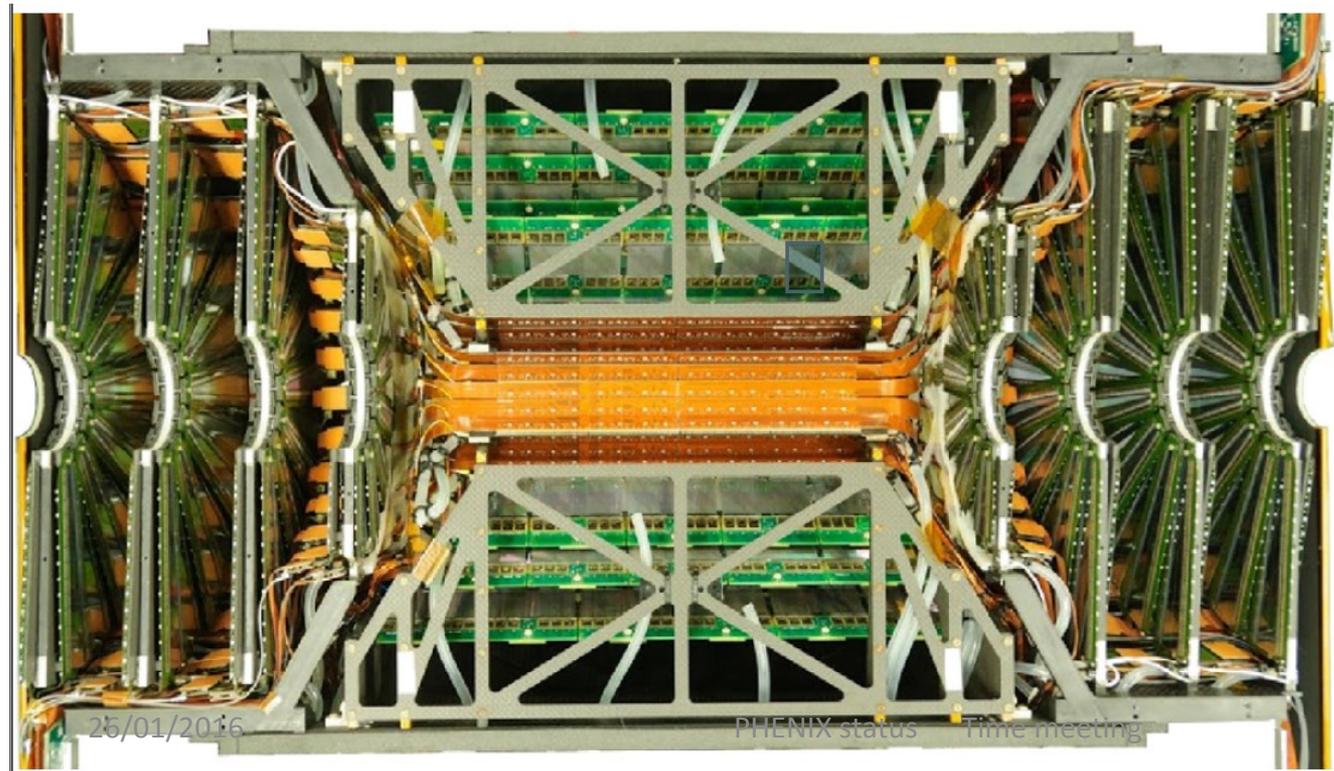
- Last PHENIX run
- Detector: with FVTX, VTX and MPC(+MPC-EX)
- AuAu 200: Increasing the dataset, HF-> double the data, complete HF measurement
- dAu energy scan : onset of QGP in small systems



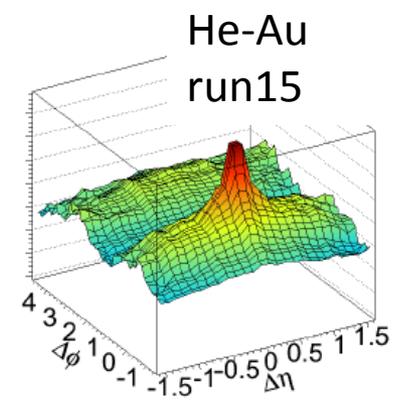
Vertex detector is necessary for Heavy Flavor studies, and improves in particles correlations

# A very important requirement for collisions : $|z| < 10\text{cm}$

- In the  $|Z| < 10\text{cm}$  vertex: **> 7KHz up to end of store**
- + high overall luminosity



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



# Calendar

- Watch shifts started 12 January
- subsystems initial setting up done, but still optimizing.
- Magnet ramped on, is OK, will stay off during AuAu setting up as requested
- UPS 15KV temporarily connected
- DAQ running will all subsystems in
- Full shifts started 26 January
- First (physics) collisions in PHENIX expected by Feb
  
- **Ready for stable Beam KHz collisions for timing BBC ZDC and then all other subsystems**
- Accesses can be welcome. Still optimizing.
- +Close east and west arms “ $\leq$  Friday”

# Backup

# 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. »

# 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.

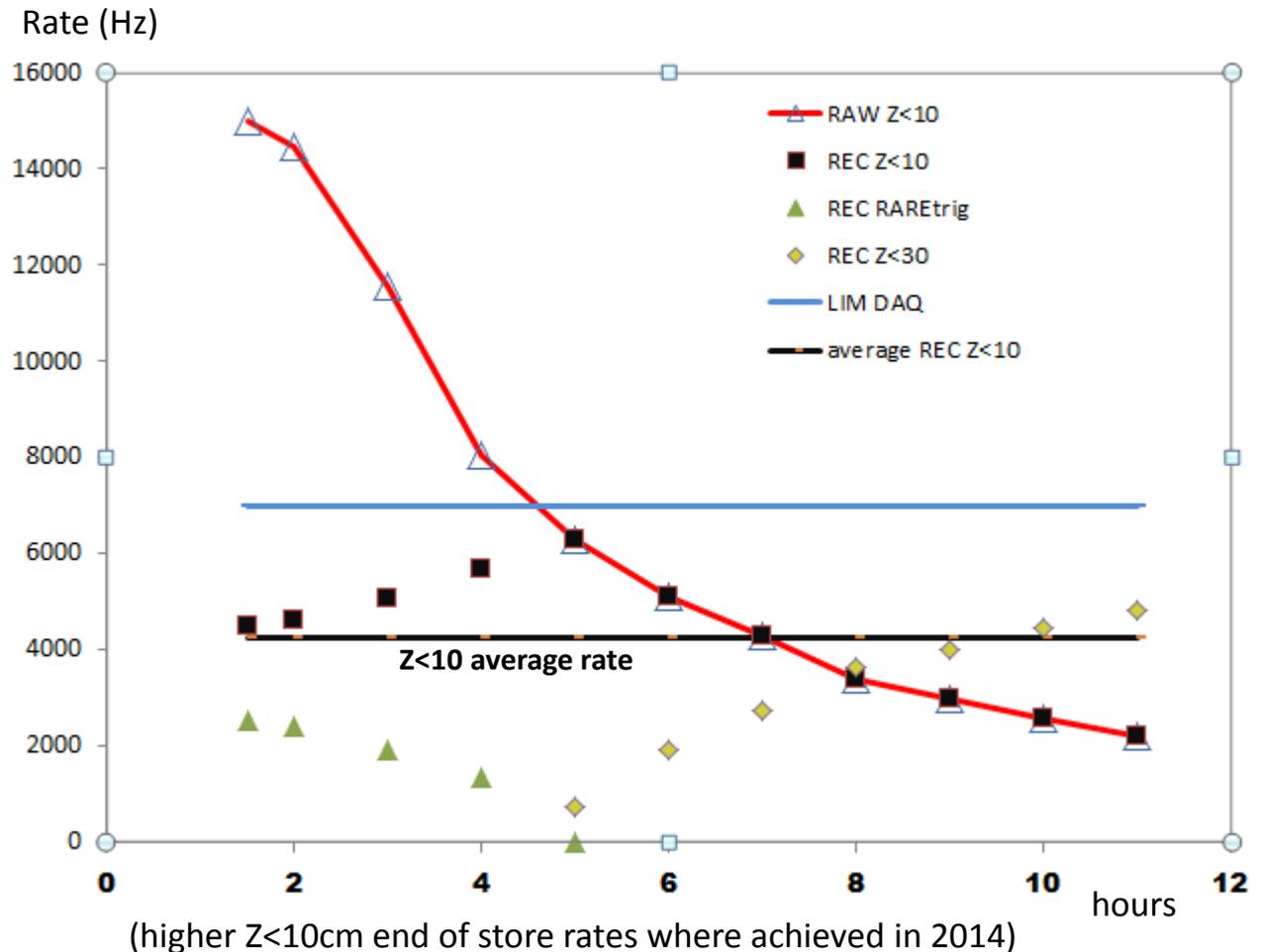
# Store stability: Au Au

Acquisition rate : 6-7 KHz

At beginning of store, part of the bandwidth is devoted to rare triggers

the second part of the store causes a lowering of the average rate of Z<10cm events

« effective luminosity » for phenix depends on **keeping the Z<10cm rate above 7KHz** in the 2/3 second part of the store



# End of run 14 AuAu 200 conditions were not so far from our 7KHz goal

