# PHOBOS
# Run 5 Progress

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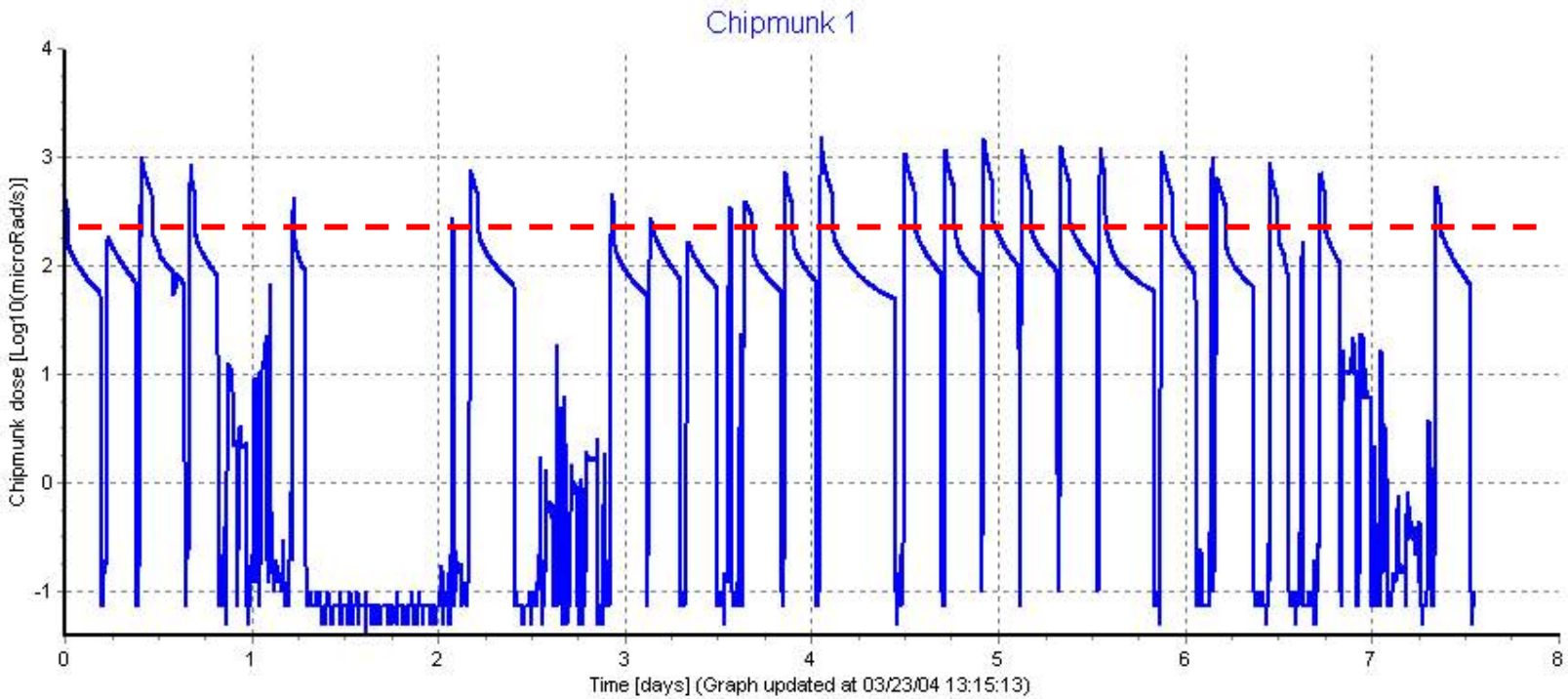
January 12, 2005

# Run Preparation

- Detector fully comissioned
  - Still working out kinks w/ trigger detectors, readout, etc.
  - Access today very useful for minor repairs
- DAQ fully comissioned
  - Stable and running at 400 Hz to tape
- Trigger configuration approaching production running
  - Triggering on vertex within $-25 < z < 10$ cm

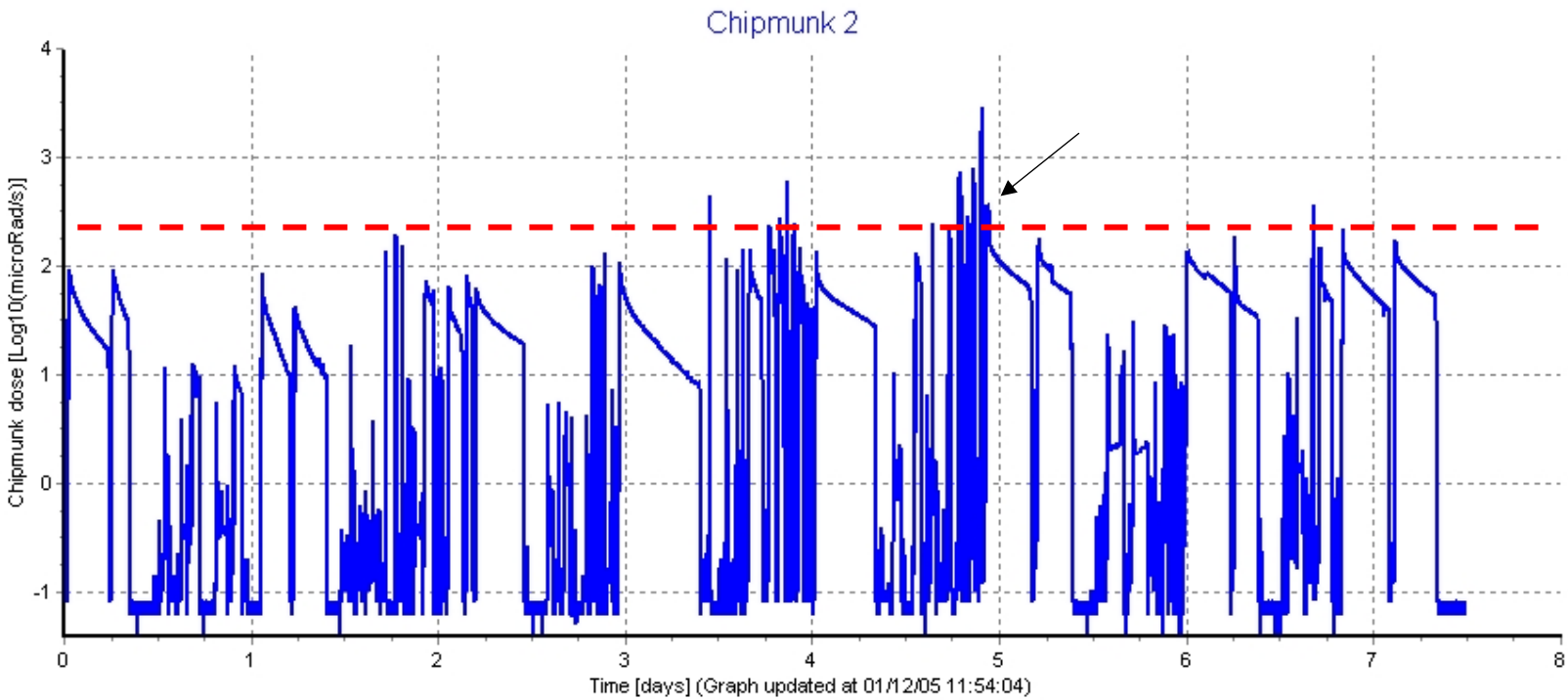
# Radiation in Run 4

- End of March 2004



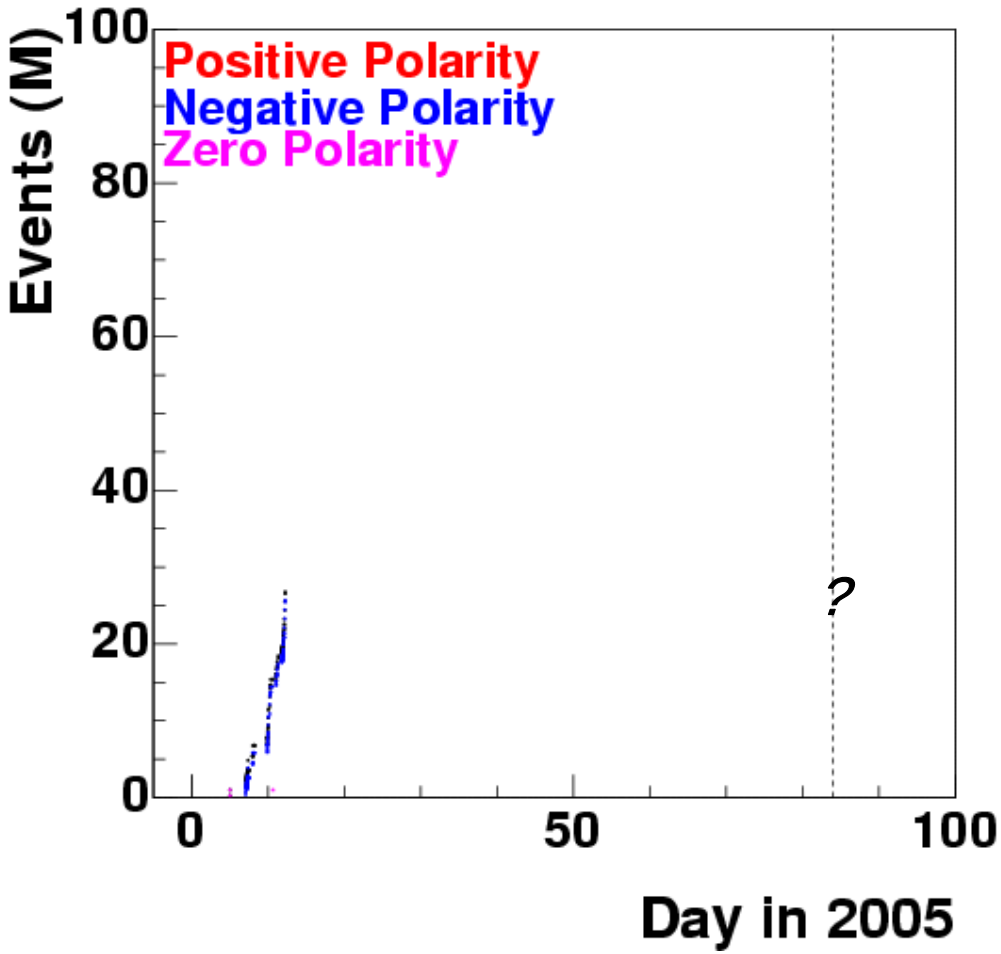
# This Week in Chipmunk 2

- Radiation far below Run 4, so far...




*48 bunches leads to short-lived pressure rise.*
*Still evaluating lost time vs. pile-up issue*
*(need statistics for RHIC stores and PHOBOS data)*

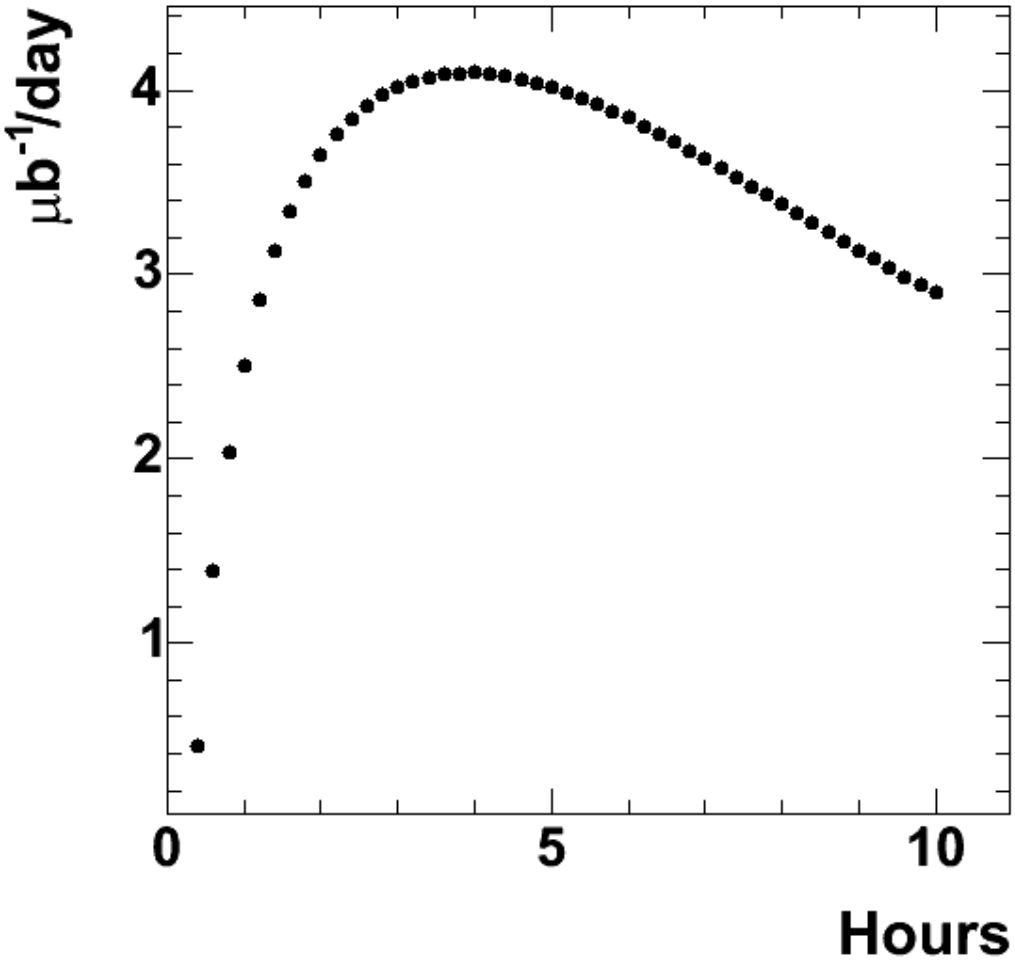
# Run Statistics Cu+Cu 200 GeV




*27M triggers to tape as of 8am this morning*

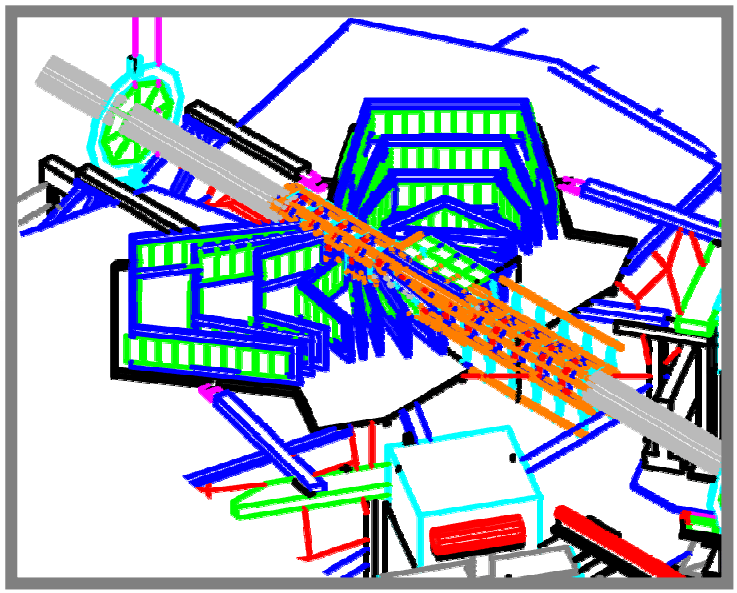
# Store Length

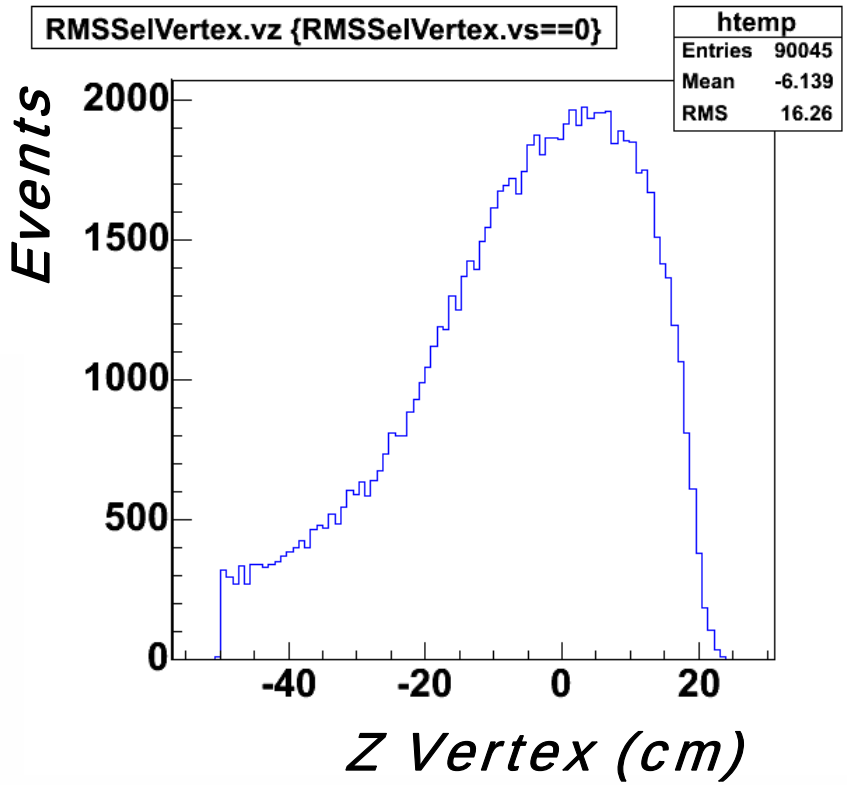
- Assume 7000 Hz ZDC, 500 Hz DAQ, ½ hour between stores, 1/3 hour startup, $\tau$=2hr

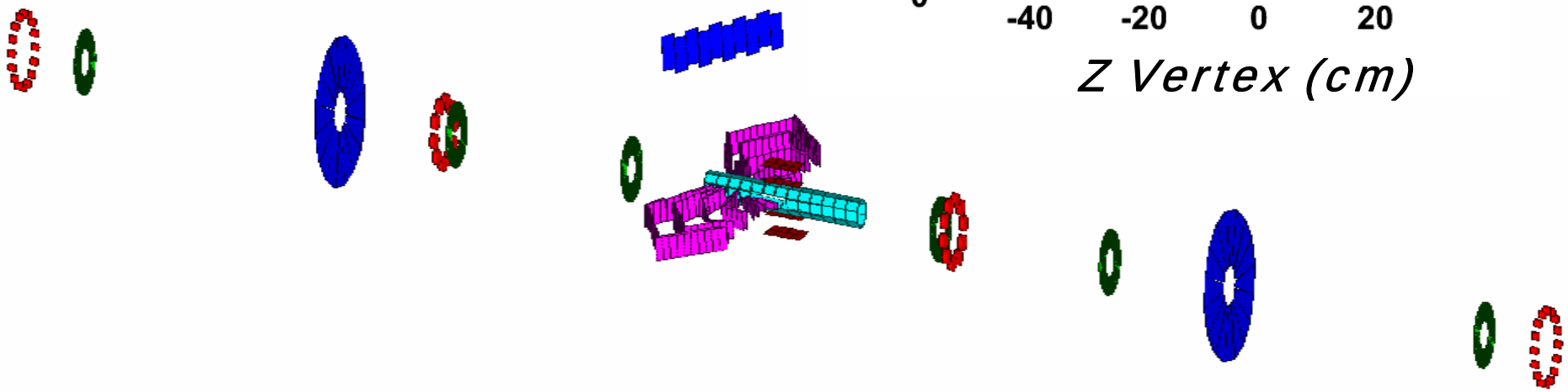


# Vertex Distribution

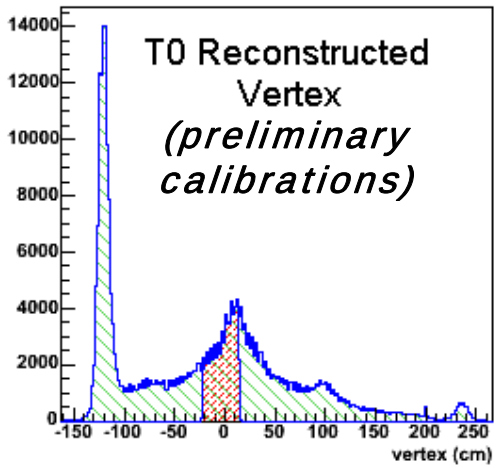
- Production ran automatically

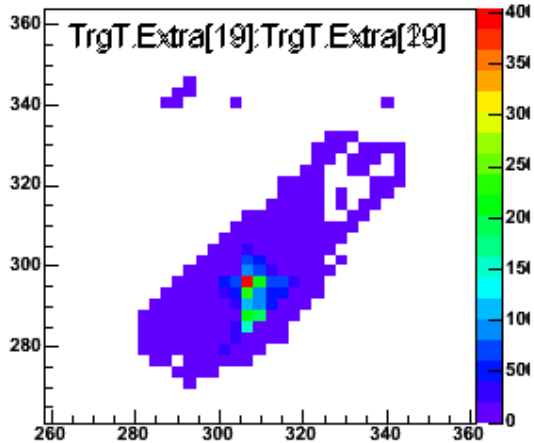


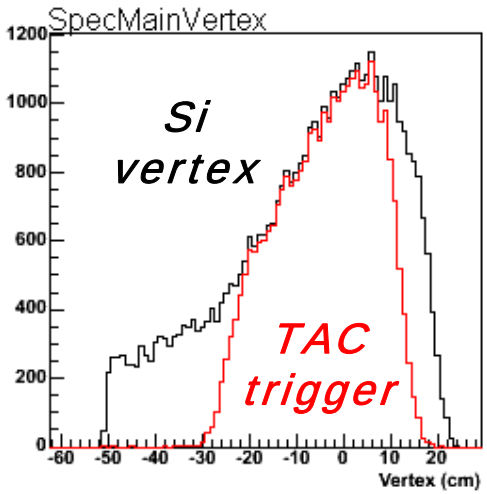


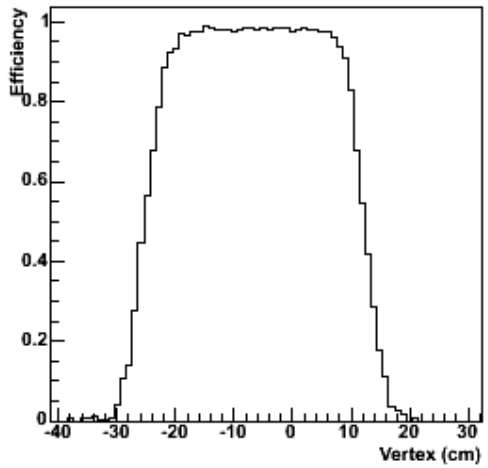



# Commissioning TAC Trigger




*Vasu Chetluru, UIC*

# Plans

- Finished with access for the day
- Finalize production trigger
- Physics production running

# Run Conditions

- Required run conditions to achieve goals – luminosity, $\beta^*$ etc.
  - Assuming $\beta^*$=3m for 200 GeV as last year

- Special requests
  - Fixed-length stores are clearly optimal for overall operation of PHOBOS
  - We would like additional time (e.g. 45 minutes) in a store if there is a substantial (>30 min) vacuum breakdown.
  - Similar to last year – times should be appropriate for the actual behavior of the machine
  - (pp): Special 400 GeV run as early as possible.

# Physics Goals/Needs for Run 5

- Physics goals for planned Cu-Cu run
  - Energy and centrality dependence for
    - $4\pi$ observables (multiplicities, flow)
    - Particle spectra

- Needs (Cu-Cu)
  - ~ 1 Billion events @ 200 GeV (1.5-4 $nb^{-1}$ or 2+8 weeks)
  - ~ 150 Million events @ 62.4 GeV (2 weeks)
  - 1 day @ 22.4 GeV (injection)

# Cu+Cu Event Display