PHENIX status

Ralf Seidl (RIKEN)

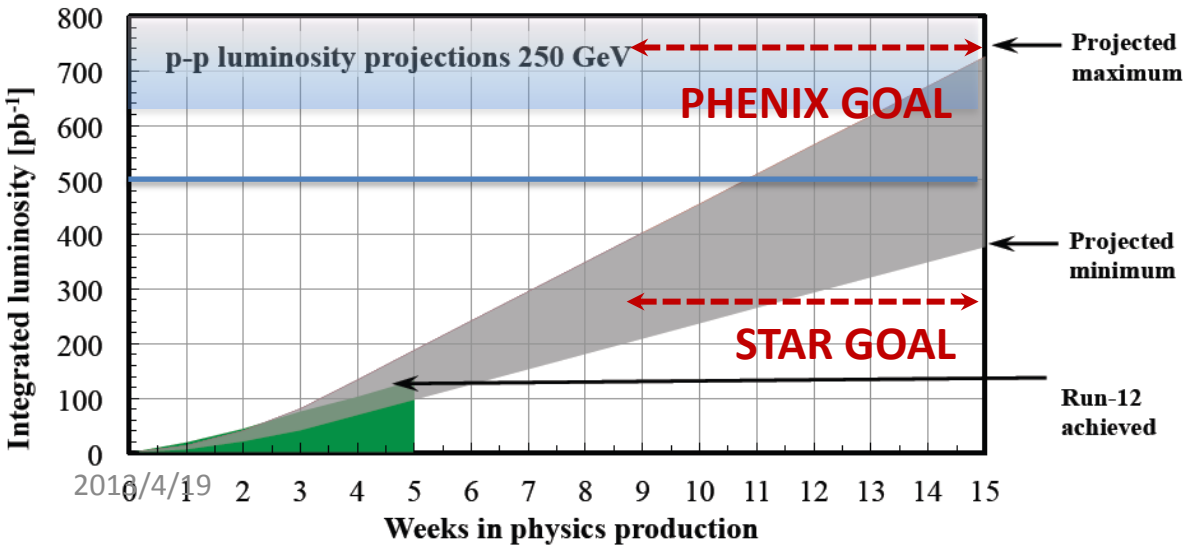
PHYSICS Goals

- W→mu A_L
- W→e A_L
- A_{LL} of forward clusters and central pions

FOM: LP^2 , muon arms

FOM: LP^2, central arms

FOM LP^4 , MPC, central arms, relative luminosity



From spin write-up:
Goal 500 pb^{-1} delivered
STAR goal: 275 pb^{-1} delivered
PHENIX goal: 300-(run11+12 lumi) pb^{-1} recorded: 750 pb^{-1} delivered

http://www.bnl.gov/cad/esfd

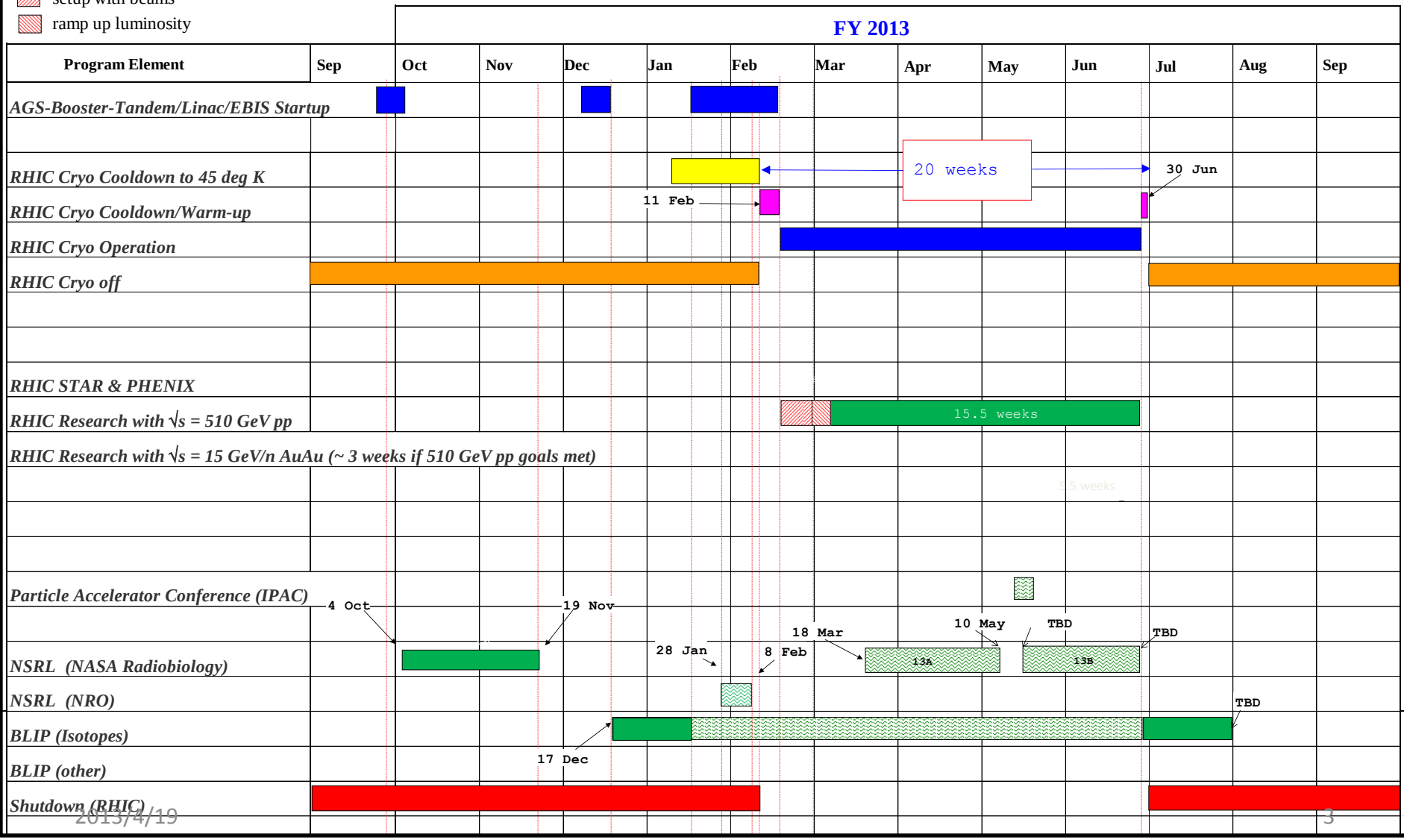
Scheduling Physicist: Andrei Poblaguev

C-A Operations-FY13

4 Feb 13

concurrent with RHIC
setup with beams
ramp up luminosity

planned, budget permitting, Preliminary



PAC recommendations reminder

For Run 13 the PAC recommends the following (*in order of priority*):

1. Running with polarized proton collisions at 500 GeV to provide an integrated luminosity of 750 pb^{-1} at an average polarization of 55%.
2. Depending on the amount of running time remaining after priority #1
   a. If less than 3 weeks remain, a week of 200 GeV Au+Au collisions.
   b. If at least 3 weeks of running time remain, 3 weeks of 15 GeV Au+Au collisions.

- PAC is quite explicit about running anything else this year: *"To reach this goal may require running in this mode for the entire Run 13"*

Polarization is Magic

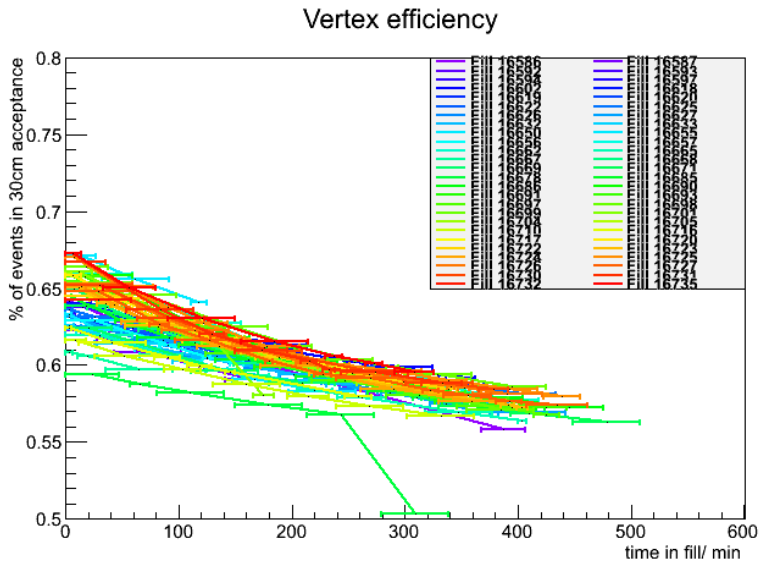
and efficiency

and Accelerator Uptime

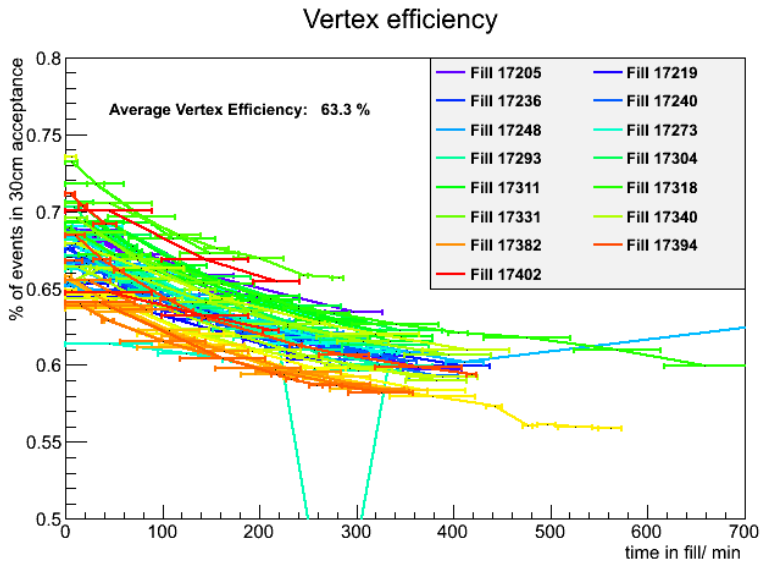
- PHENIX has worked very hard to increase our data taking efficiencies
- However, overall uptime is very low this year
  - Unforseen Failures are random and cannot be helped, but
  - Beam development geared towards future years might be useless, if this year's physics turnout falls short of goals

Vertex distribution

Run12 vertex efficiency (30 cm vs novertex)

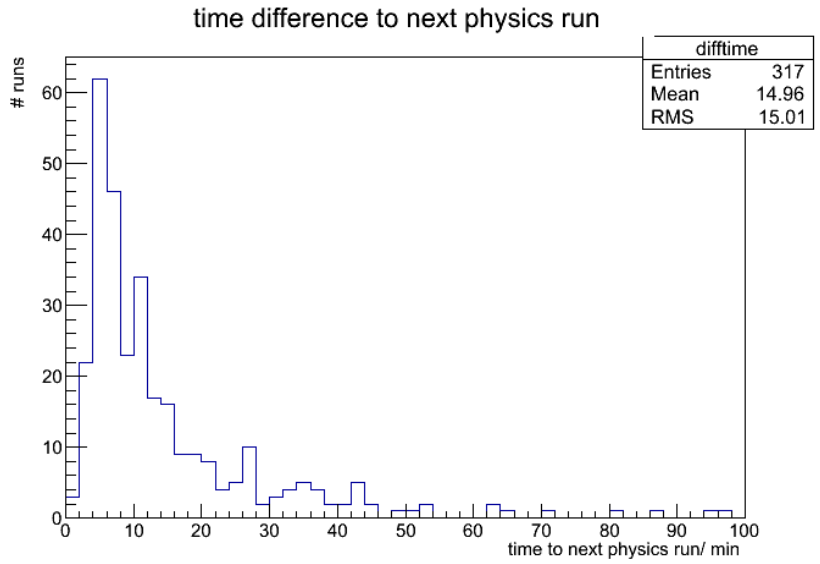


Run13 vertex efficiency (30 cm vs novertex)

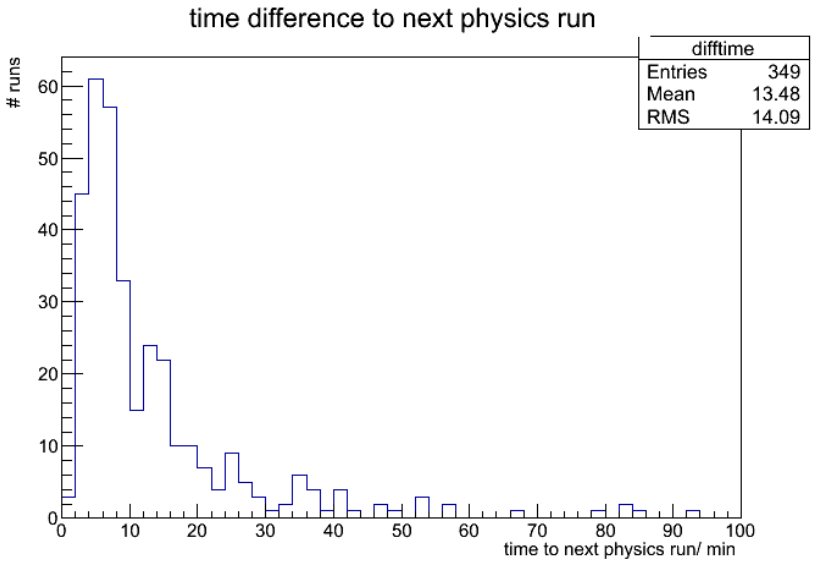


Time between physics runs (within a fill)

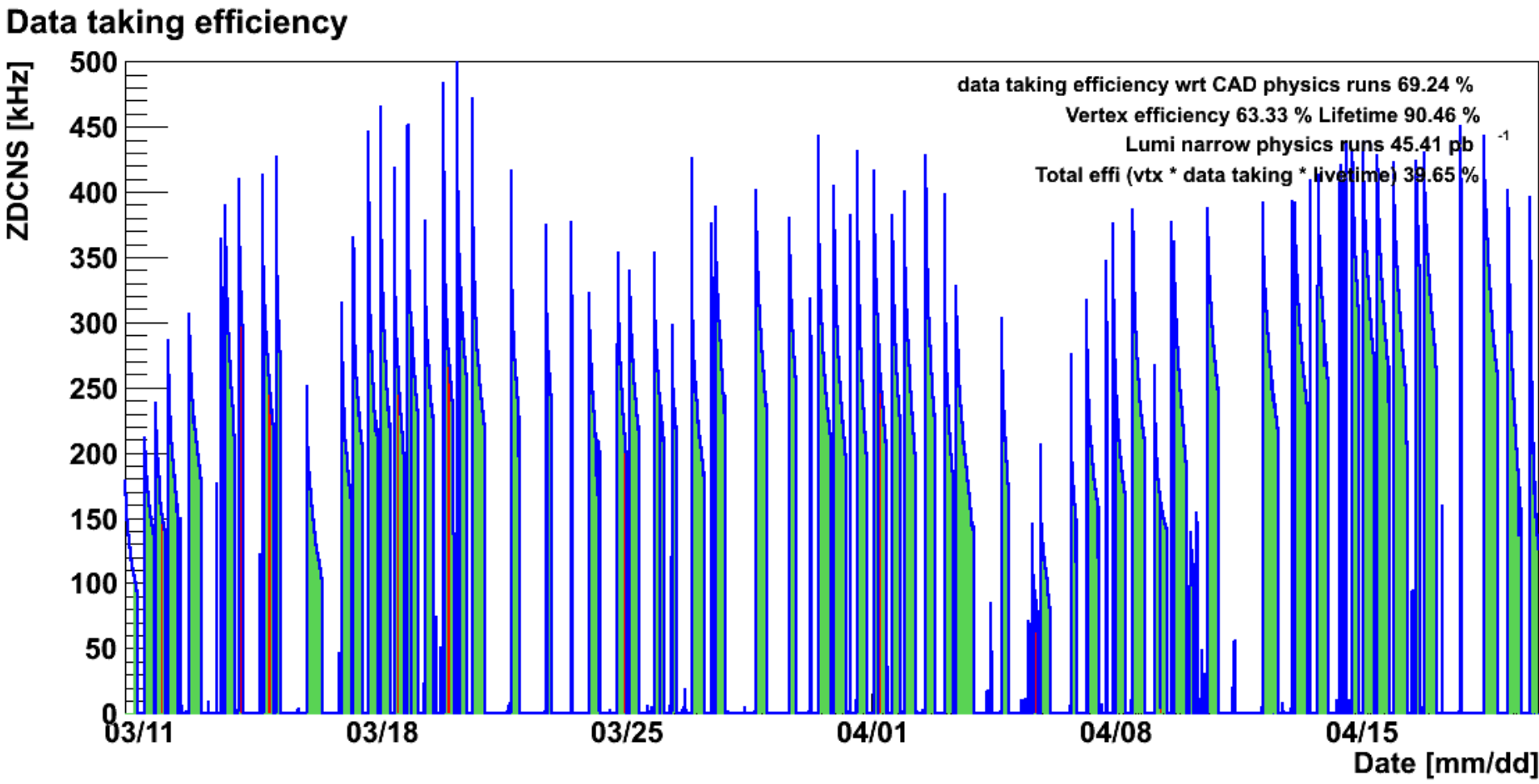
Run12



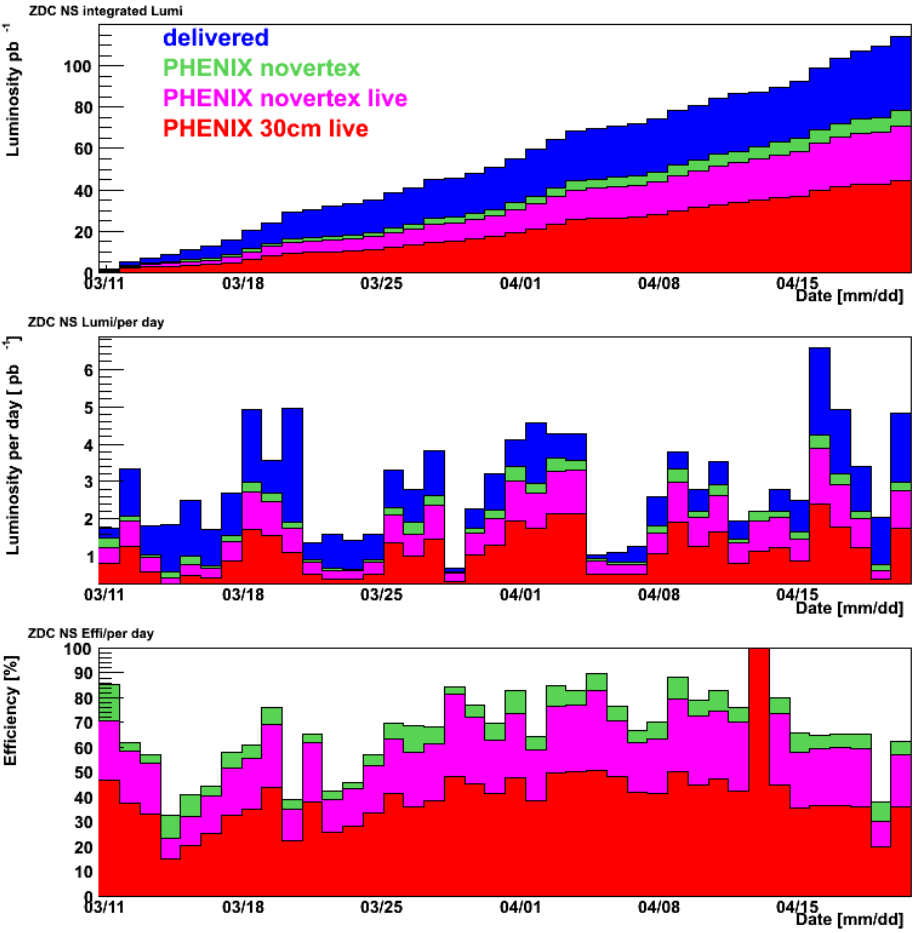
Run13



Total efficiencies

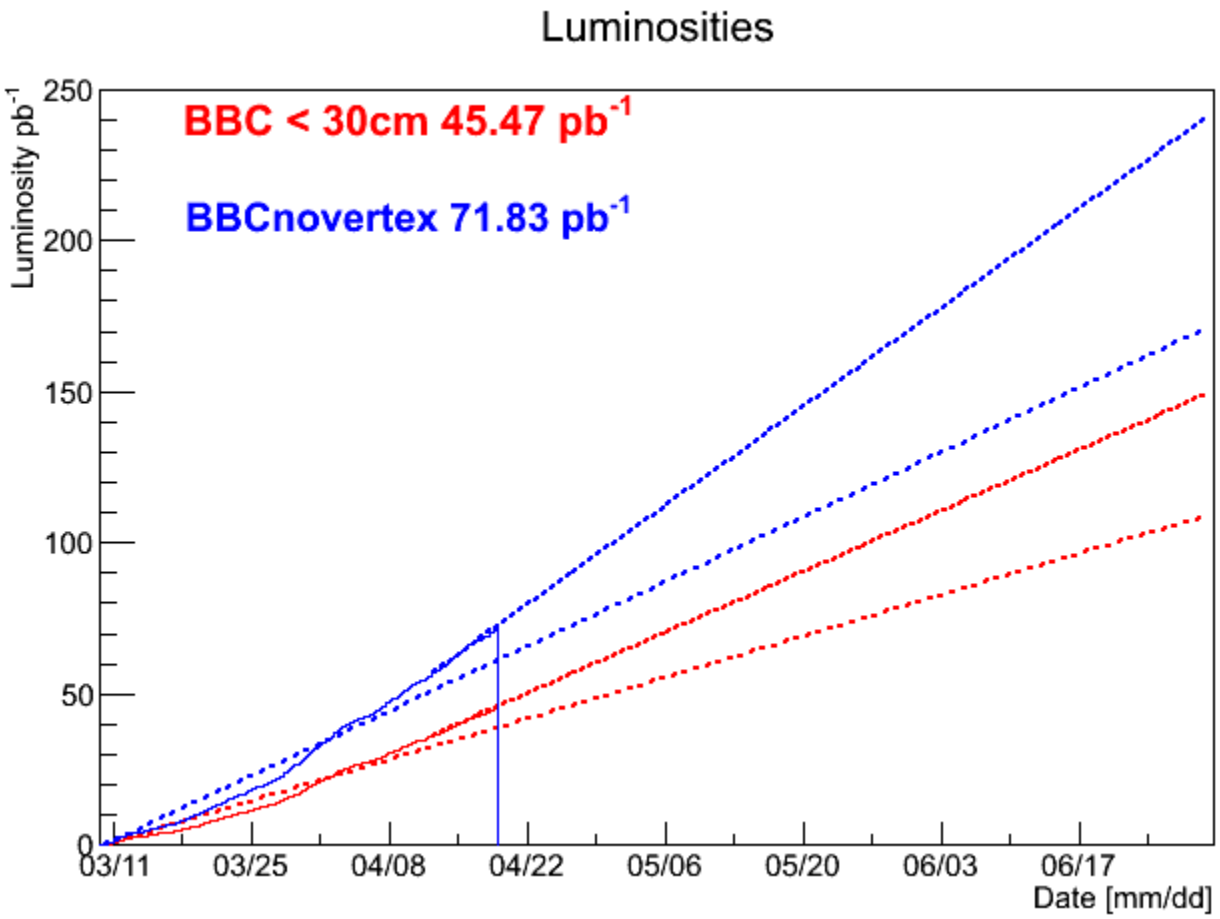


Efficiencies vs day

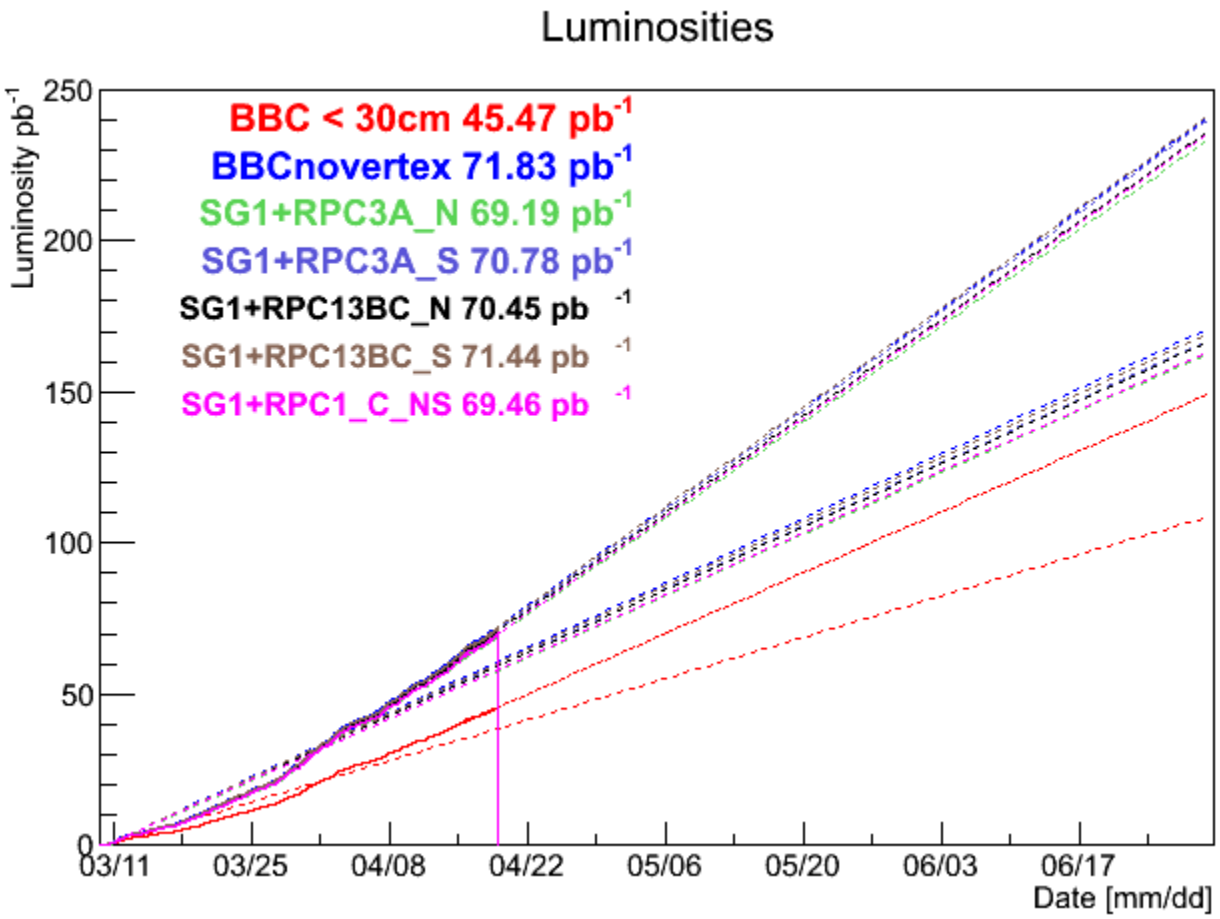


- Weekly modulation seen
- We need more weekends and fewer Wednesdays ☺

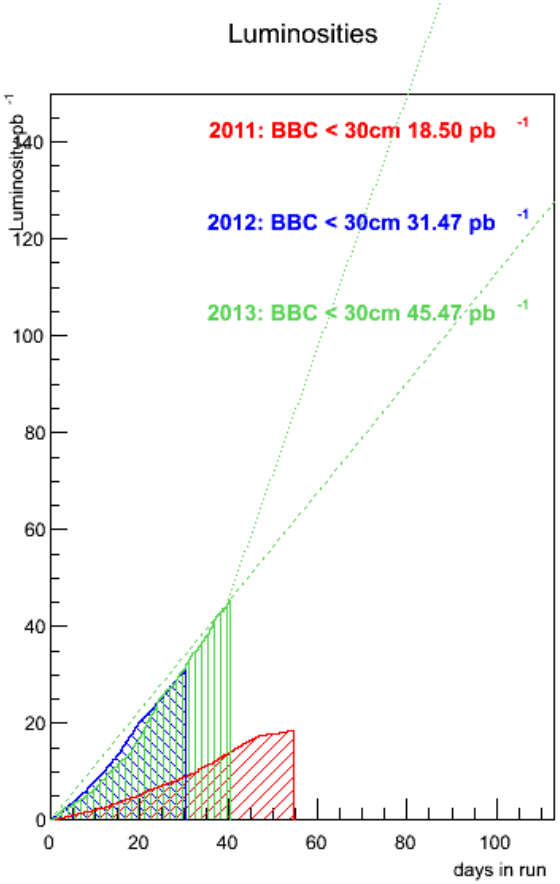
Projections

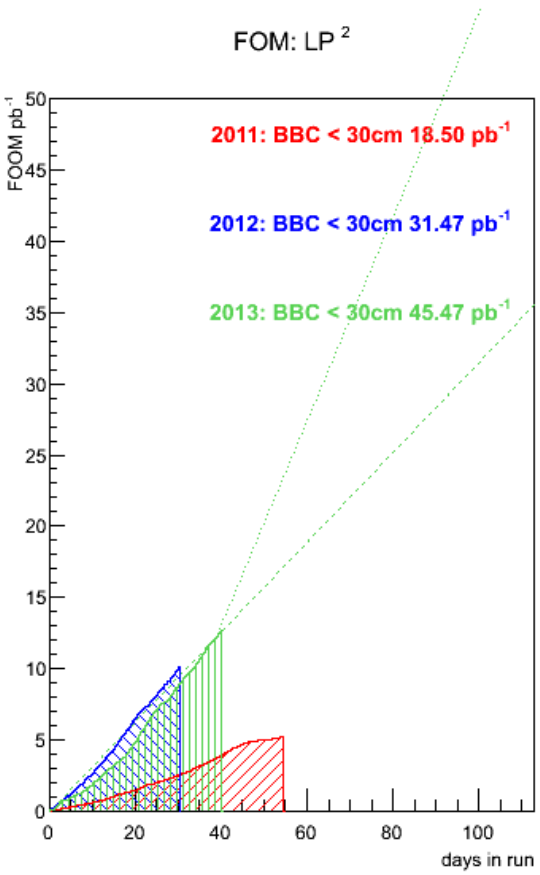


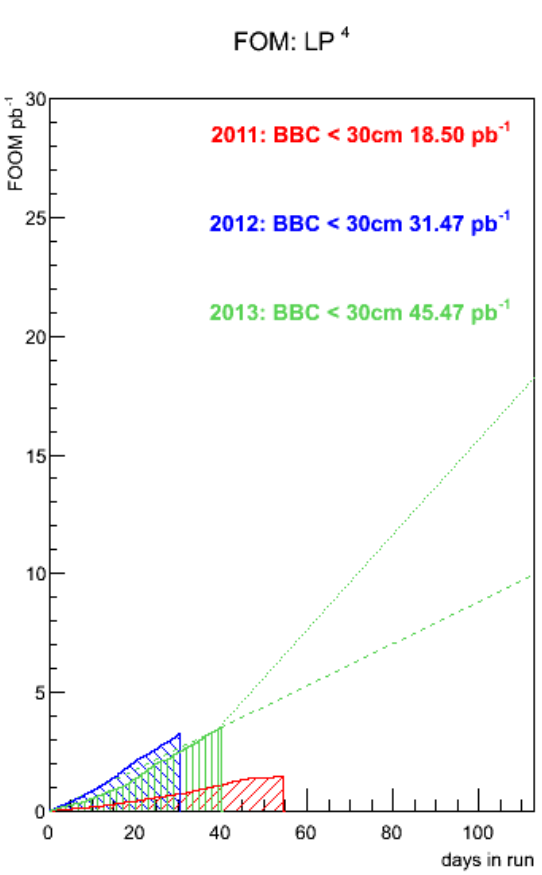
Projections



Luminosities vs Years



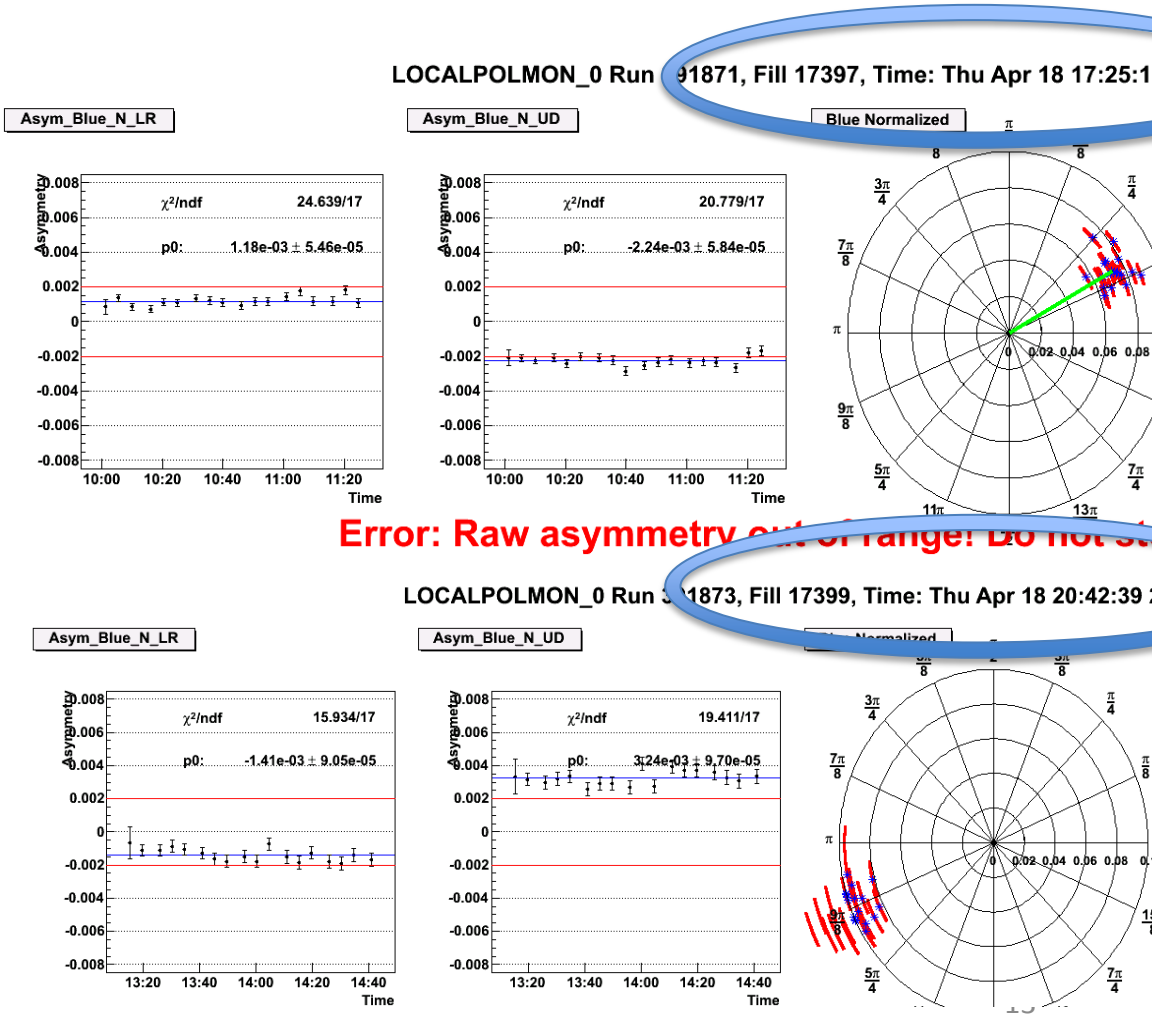




- So far barely better in luminosity slopes than Run12, but FOMs comparable

Database issues last night

- CDEV data was not updated in Fill 17399 until middle of the fill:
  - Still showed P22 and Fill number 17397
  - Should have been P23 and 17399



- Will implement cross checks in timestamps of other CDEV values

Other things

- Transverse components again larger, in last fill > 5%, need to have Angelika do her Magic again
- RPC3 (in the tunnels) backgrounds overall reasonable, clear correlation seen in incoming backgrounds with Beam lifetime in last two filles (ie Blue → large BG, Y → very small)