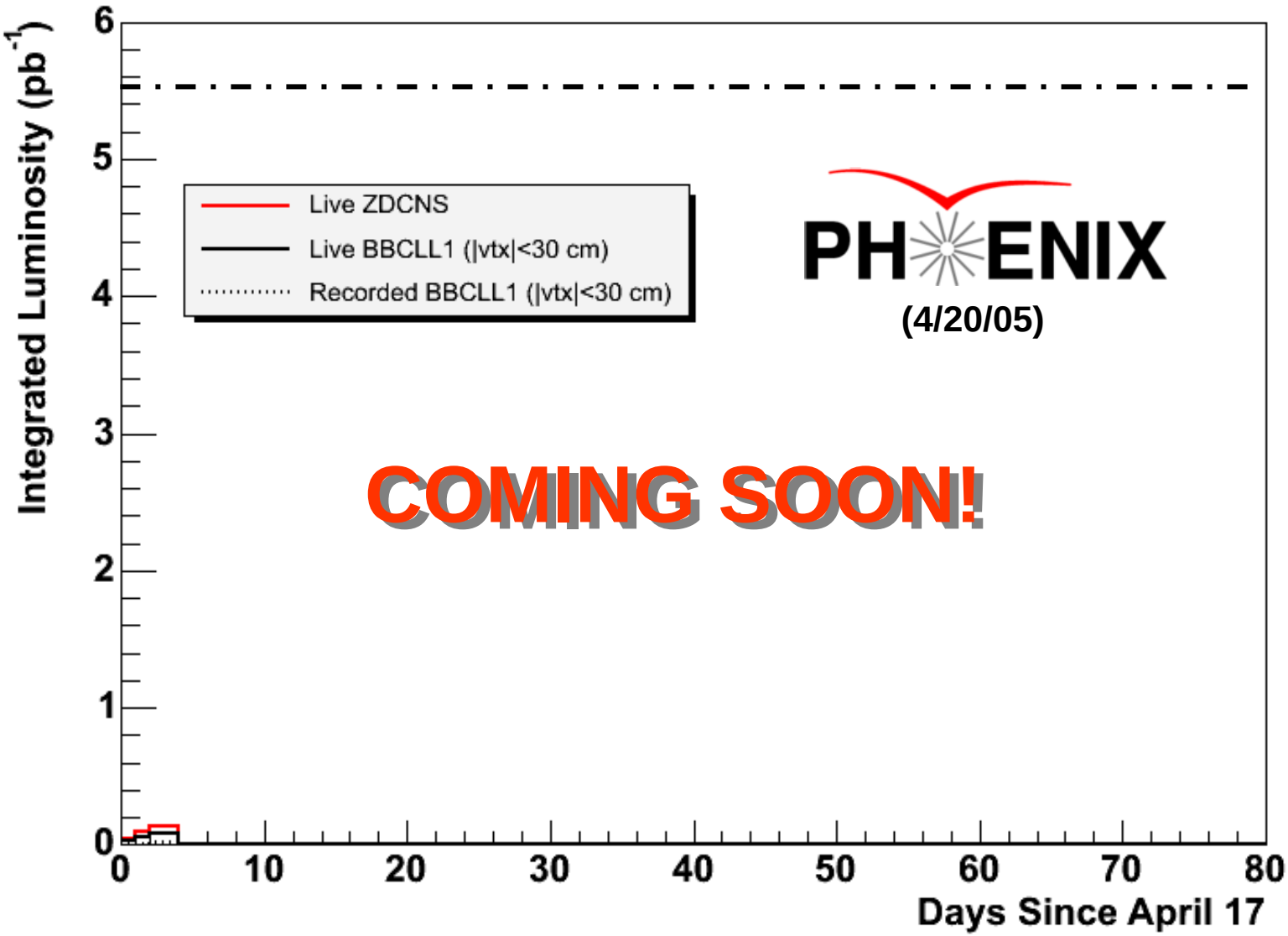
PHENIX Status

- In the previous week PHENIX took mostly local polarimeter (LPOL) data
  - Used to help sort out issues with yellow polarimeter.

- Physics declared April 17th
  - Since that time we have sampled ~88nb^{-1} BBCLL1
  - Almost all of this will be used as minbias data
    - Polarization measurement not reliable until after Tues. access
    - Didn't really start on our physics goals until last night…

- What PHENIX Needs:
  - Work on storage RF to improve vertex distribution
  - Bunch pattern with empty-on-full crossings
  - Stable, reproducible physics running over weekend (4/22-4/24)

Run-5 pp Integrated Luminosity



400+ GeV Running

- It is the position of PHENIX that 400+ GeV development is ***extremely important*** to the future of the polarized proton program at RHIC.
  - Equally important as our Run-5 physics goals.

- We would prefer the 400+ GeV energy ramp development to commence after we have integrated **$P^4\mathcal{L}$ ~62 nb^{-1}** (this is 1.5 pb^{-1} at 45% polarization).

  - This gives PHENIX sufficient running time to be able to establish reasonable projections for the rest of the run, and enables us to better understand the impact of shifts taken for machine development instead of physics.

  - The polarization development with the 400+ GeV ramp should come in the week immediately following the energy ramp development.

  - The overall development time should be discussed with a **very clear understanding of the potential loss of physics**, based on our experience and machine performance.

- One day of physics running at 400+ GeV should come at the end of the 200 GeV physics program.

BACKUP

PHENIX pp Delivered Request

- PHENIX Beam Use Proposal
  - Integrated “recorded” (sampled) luminosity 5.5 pb^{-1} with >45% longitudinal polarization
- Convert this to RHIC Delivered Luminosity
  - Vertex cut = 0.45
    - Measured from recent runs ZDCnarrow/ZDCwide
  - PHENIX efficiency
    - BUP planned on 0.6, we’ve seen 0.75 in CuCu
    - Many improvements made for pp run to improve efficiency
  - RHIC Delivered:
    - 5.5 pb^{-1}/(0.45*0.6) = **20 pb^{-1} RHIC delivered**
- Need to get to >2 pb^{-1}/week as soon as possible…