The future of ppg053 i.e phi papers

R. Seto

Jan 25, 2007

- Intro-Rich
- Comments on status from folks (verbal is fine)
  - Sasha
  - Kyoichiro
  - Shengli
  - Maxim
  - Anyone else
- Some slides with my understanding
- Discussion

Intro and goals for today

- PPG053 -Proposal to split to two papers

- Start discussion of papers
  - Do we know? Some data ready to go for “final”
- Decide if/when to meet next and time schedule
- Tasks
  - What is left to do?
  - Gather all information

- Final goal – recommendation for PPG or protoPPG formation to convenors with topic and timetable, people who will work and write etc

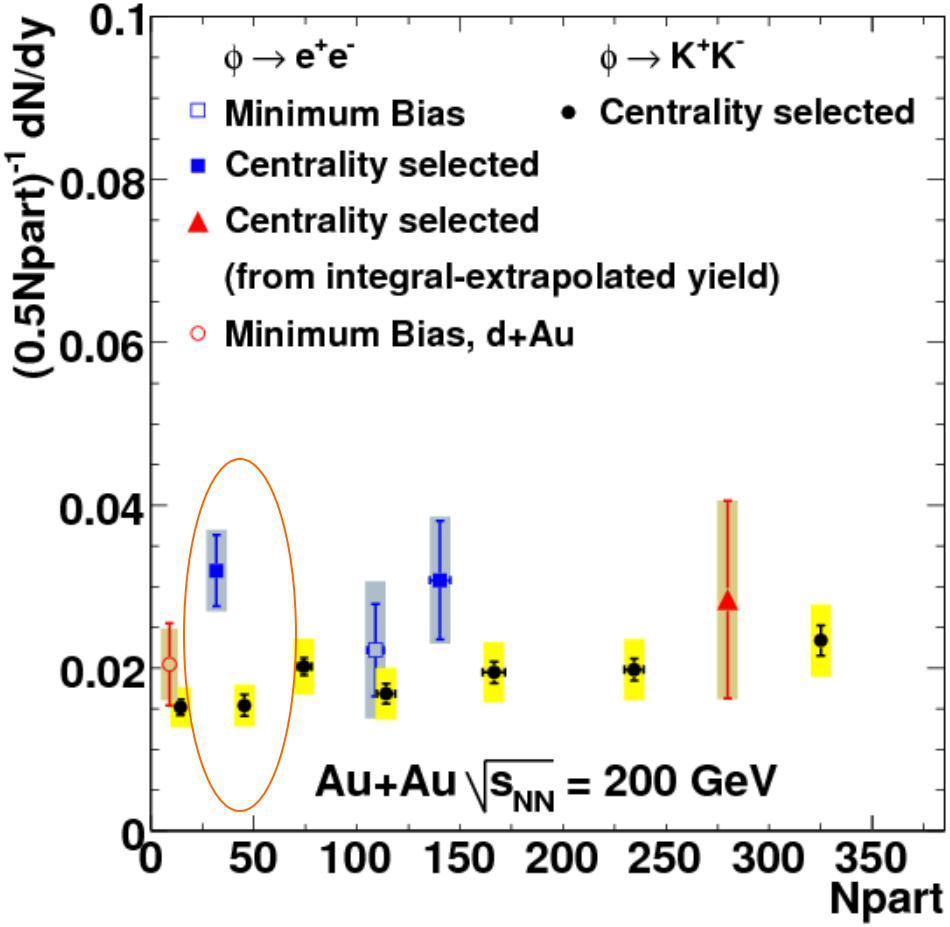
Analysis-who

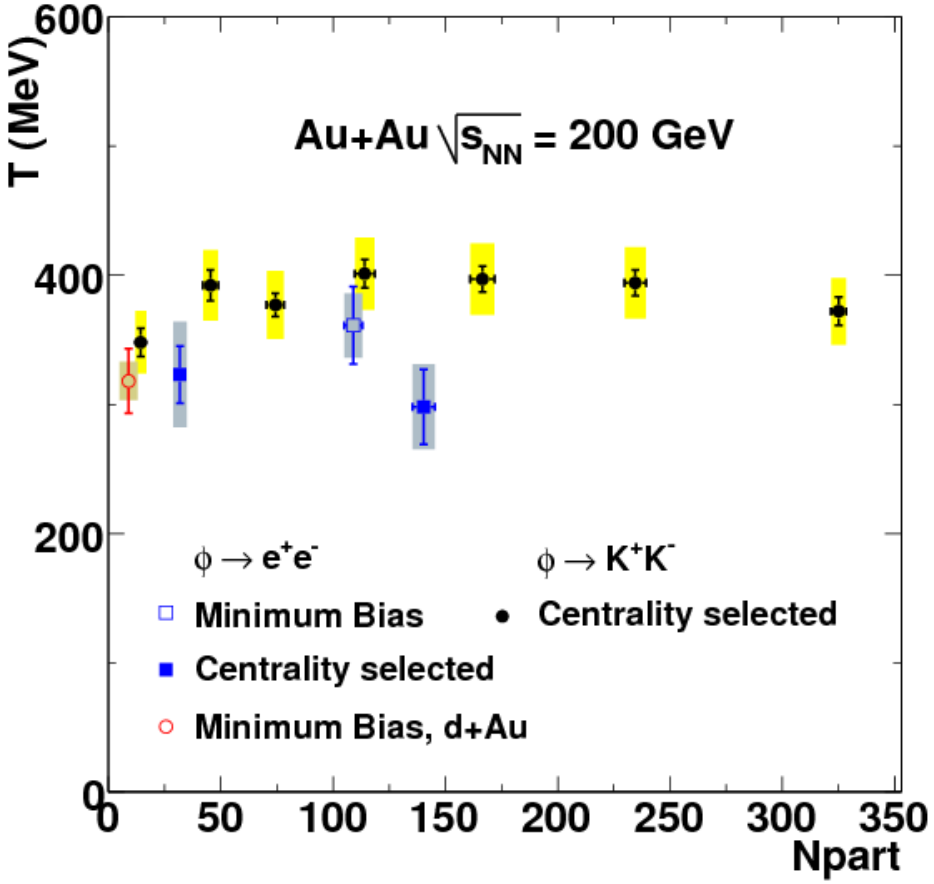
- ee
  - Sasha K (dAu, AuAu200-r4), Kyiochiro, Kenta Shigaki Yoshihide Nakamiya Kotaro M. Kijima (AuAu200-r4 and omega), Yuji Tsuchimoto (dAu)
  - KK
    - Dipali/Debsankar(dAu, AuAu200-r4), Maxim(AuAu200-r4), Shengli(AuAu62), Dmitri(pp,r5-6)
  - Am I missing anyone?
- General comment
  - Worry-folks have left or are leaving PHENIX
  - Hope- new folks pick up –finish papers, go on to new analysis

RKS – thoughts and summary i.e. tasks

For discussion

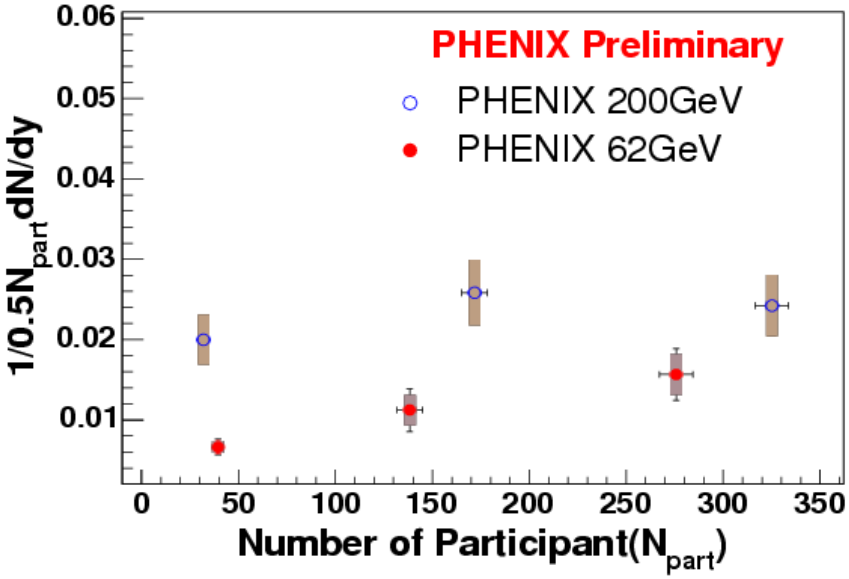
General status (summarized by Sasha)

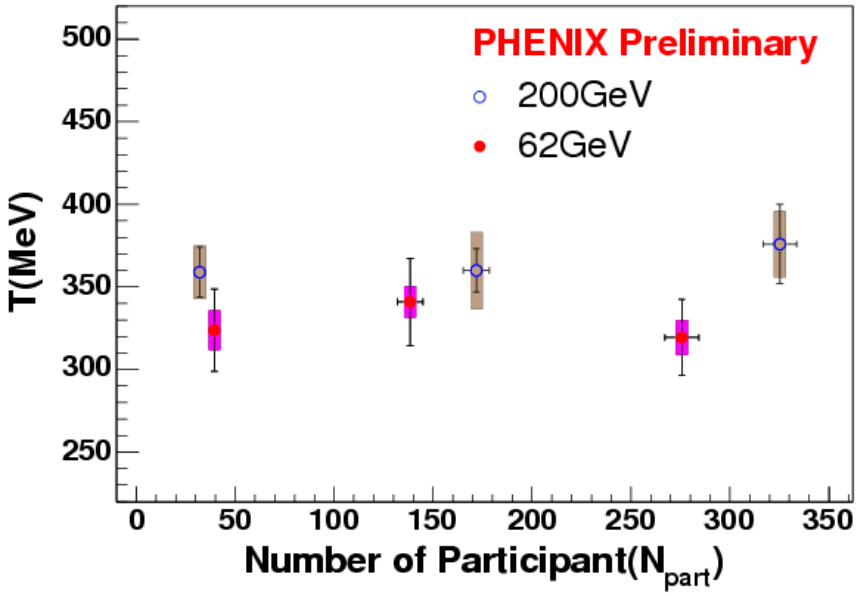




Problem – low Npart ee and KK not consistent. dAu consistent
But KK looks self consistent?

62 and 200 GeV Centrality dependence of dN/dy/Npart and T for phi to kk



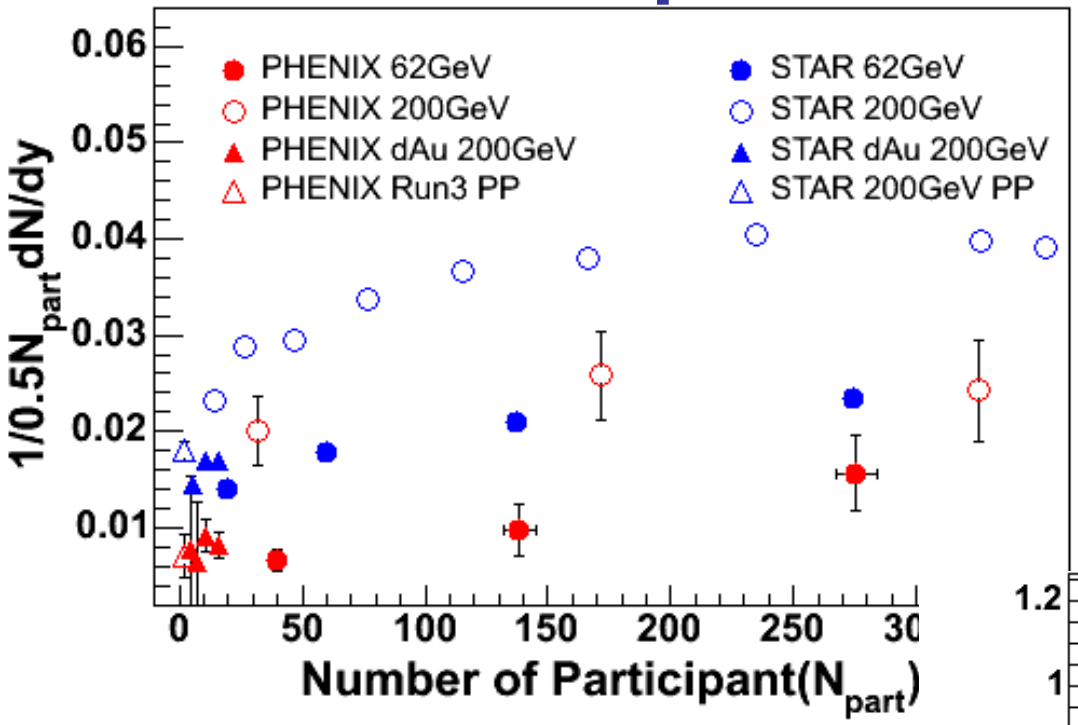


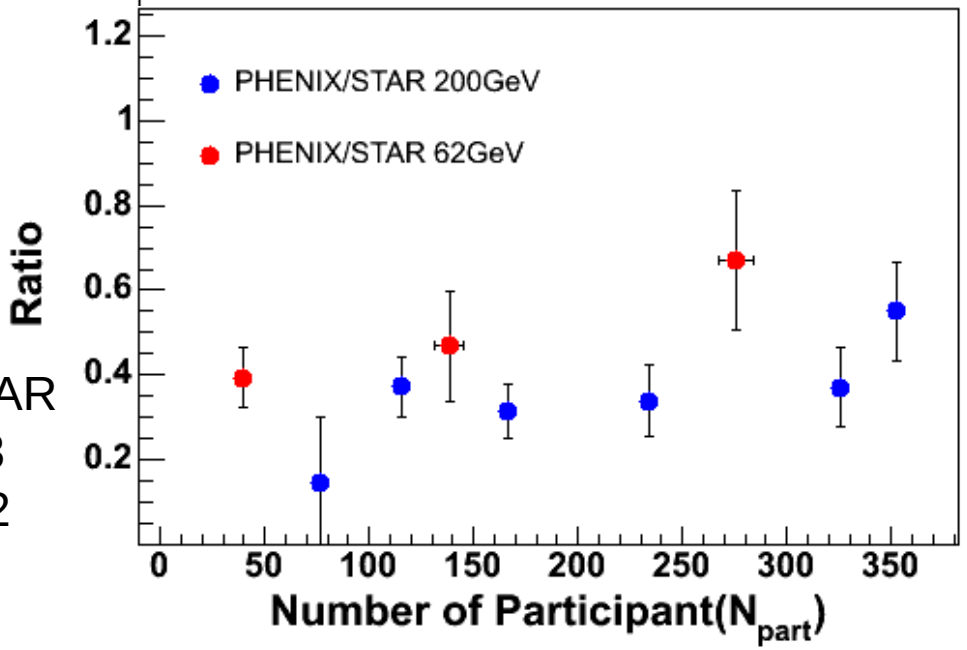
Yield of phi goes up from 62 to 200
I think it looks reasonable.
Is the yield increasing similar to p,K, pi?

Inverse slope seems to go up a bit

Energy behavior seems reasonable

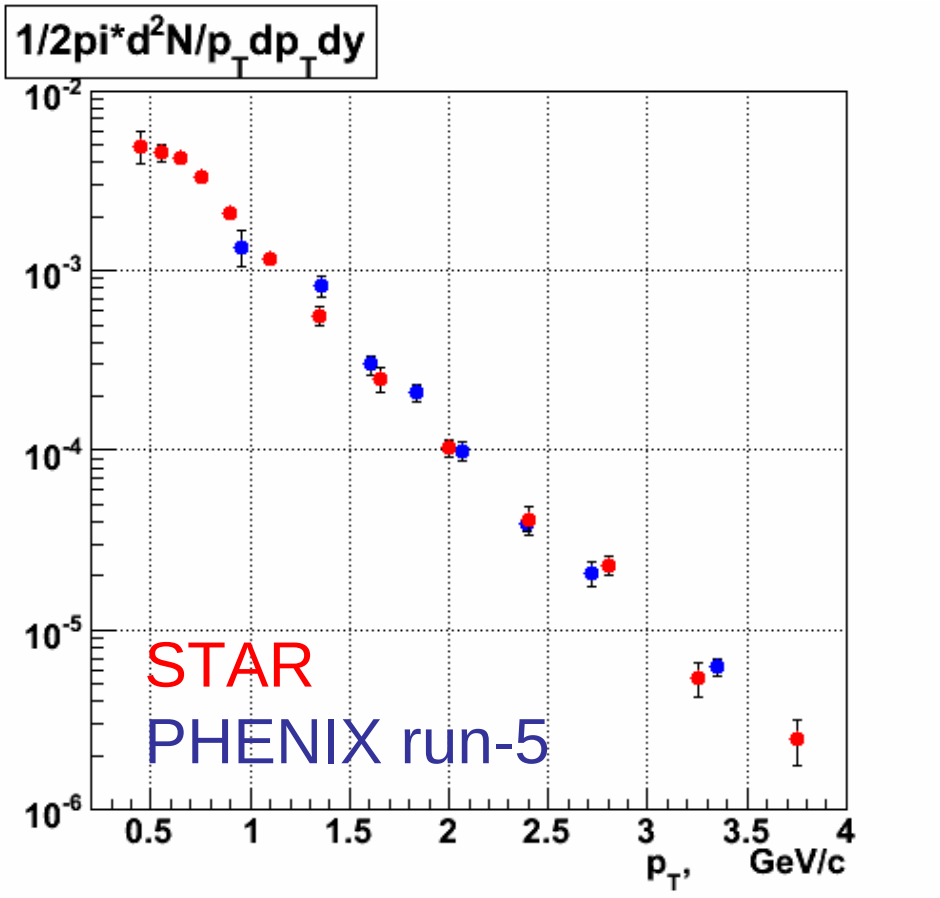
PHENIX-STAR (Shengli)
Compare of all ϕ->K^+K^- data

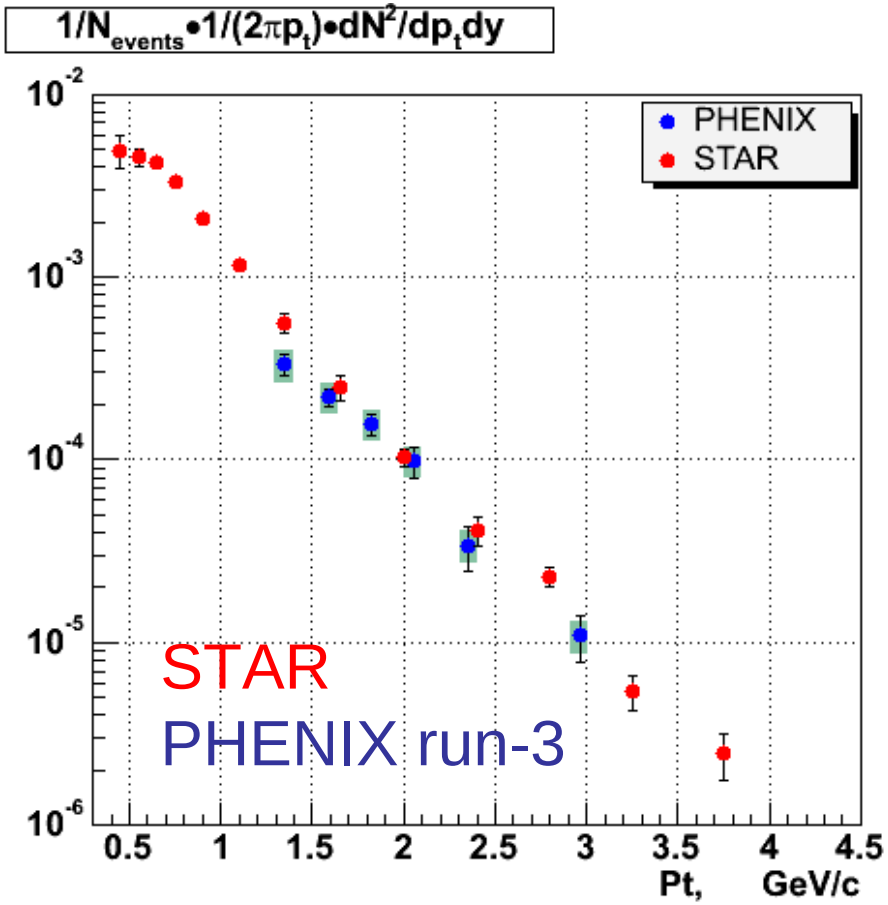




Phenix pp and dAu consistent – also STAR
STAR yield is higher for 200 ~ factor of 3
for 62 ~ factor of 2

Phi->KK in p+p: PHENIX vs. STAR dmtri

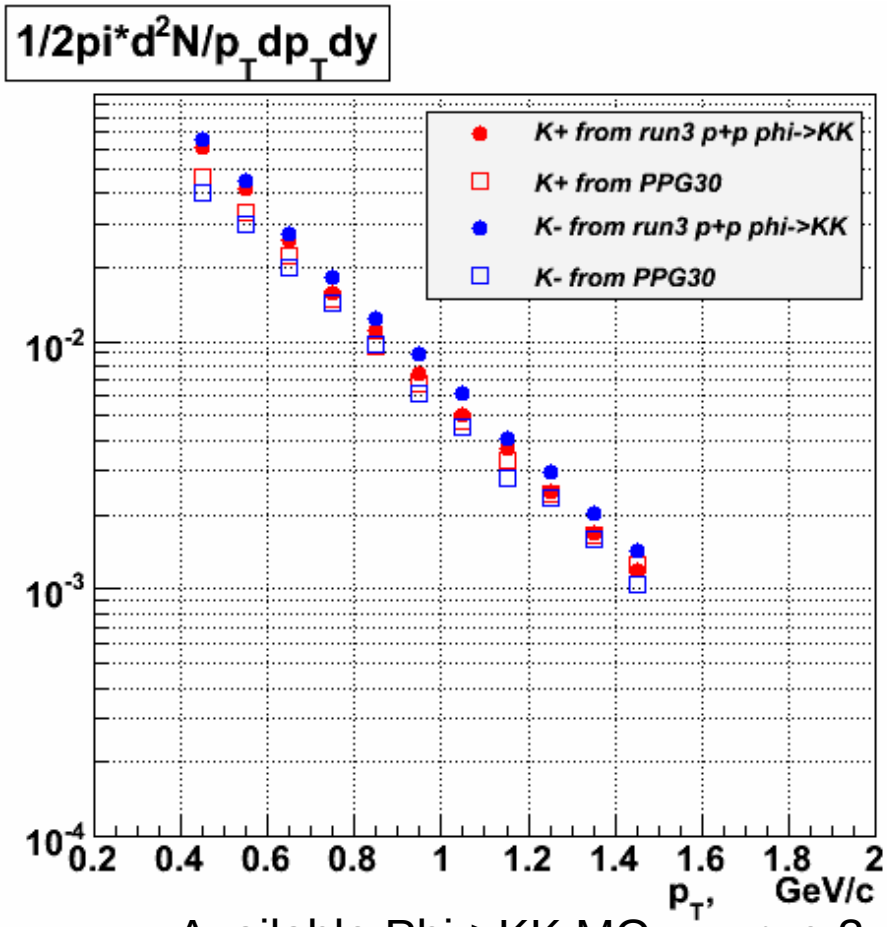


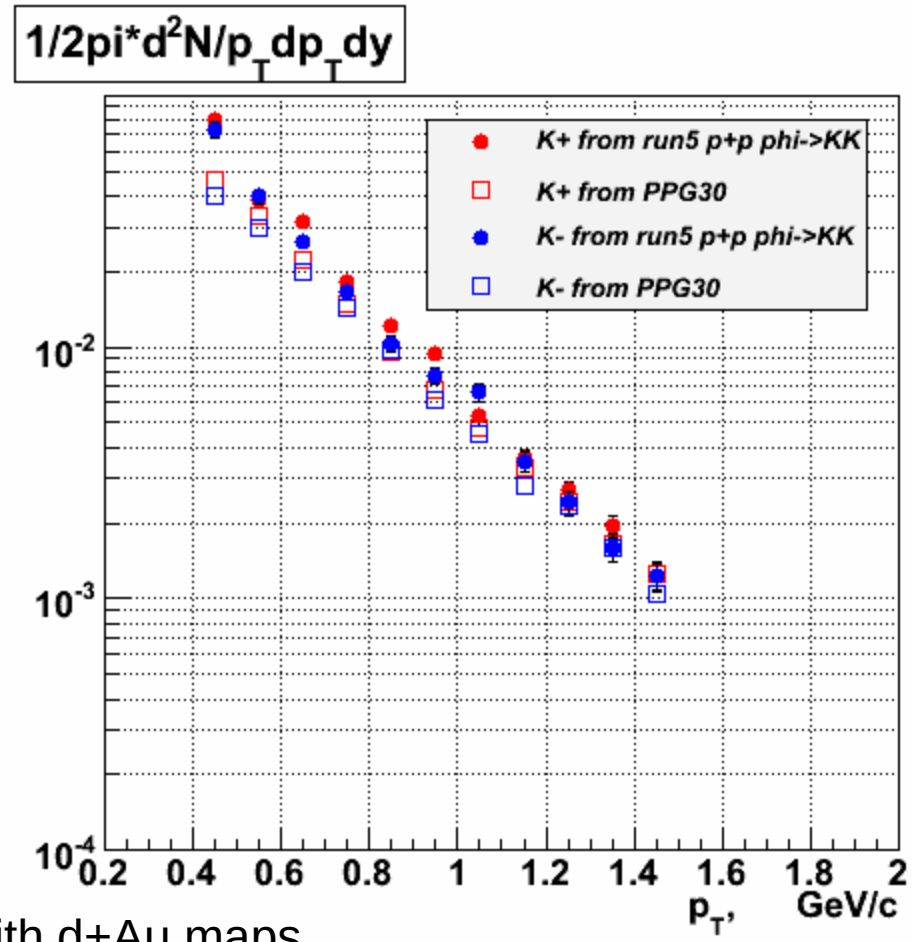


Tough to see the pp difference in the Mt

TASK - Check how slope fit and integration is done

PHENIX: kaons from PPG30 vs. those normalized by Phi->KK simulation dmitri

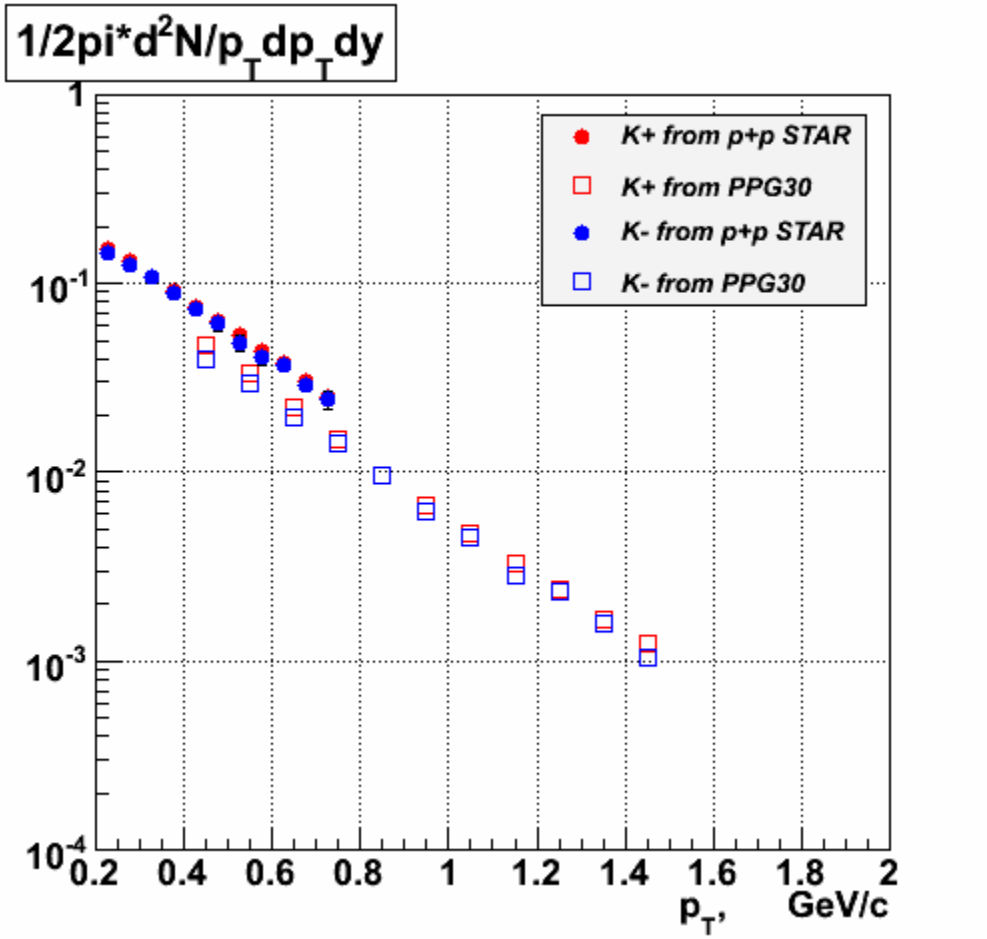




Available Phi->KK MC: run-3 with d+Au maps
run-5 with p+p maps

Yields for kaons from phi simulation correction different than for singles – Why?

Kaons: PHENIX vs. STAR dmitri



kaons from singles analysis have lower yield than STAR

TASK – double check

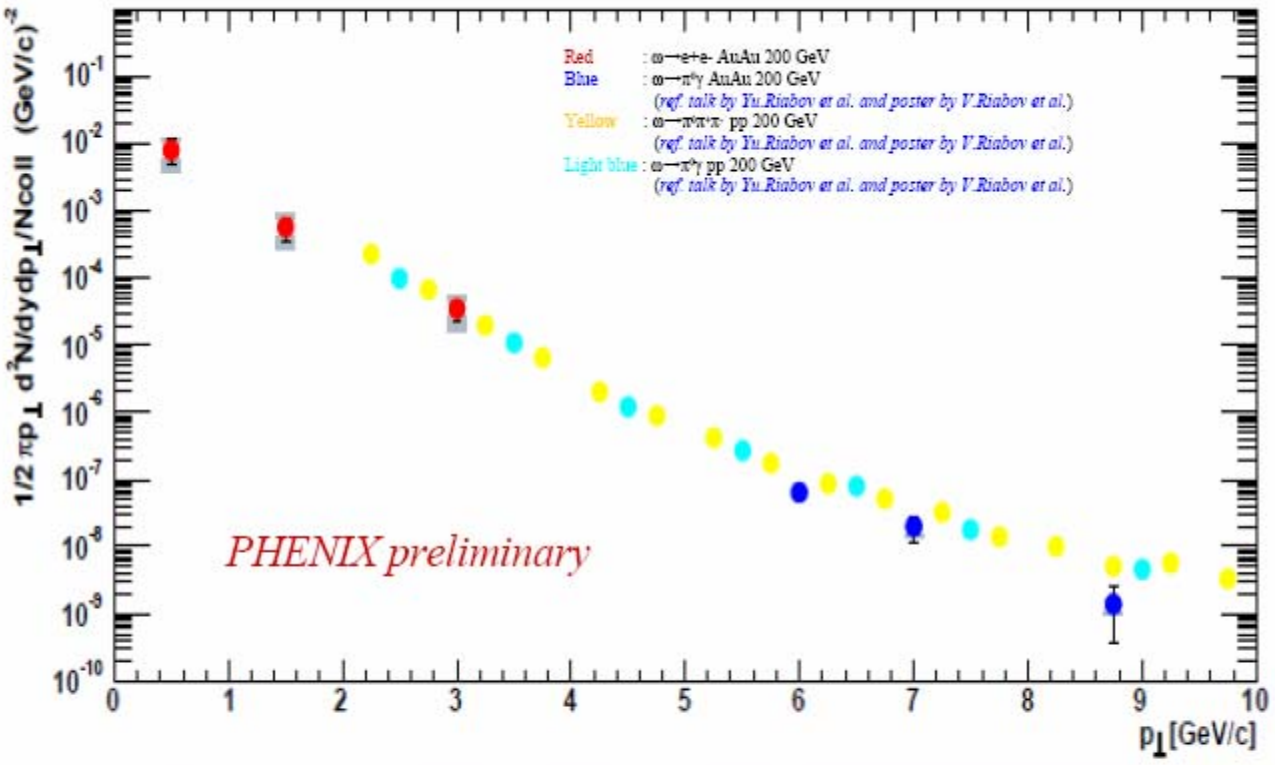
General comments

- Various analysis consistent with each other
  - How well do we know this quantitatively?
    - Tasks – AuAu ee, dAu ee, AuAu KK, dAu KK, pp KK
- We seem to be consistently higher than STAR (even in singles?)
  - i.e. could there be several problems?

Papers -Some thoughts

- BR comparison hadronic to leptonic channels
  - Paper(s) on pp to AuAu comparison of ee and KK branching ratio for phi
  - We also have omega's where we can compare ee and hadronic BR
- Rcp, Raa
  - Paper(s) on the Rcp and Raa of phi 62 and updated 200

Omega (Yoshihide Nakamiya)



~ invariant pT slope for ω mesons ~

Invariant pT spectrum for ω mesons are compared with other decay channels and other collision system.

BUT - Tasks

- Compile data points from various analysis and compare – are they consistent
  - ee (Sasha, Kyoichiro, Yuji, Kenta/Yoshida/Kotaro)
  - KK (Maxim, Shengli, dipali/debsankar, dmitri)
  - Find “golden” plotd
- PHENIX-STAR comparison
  - Singles (K, pi, p)
  - Phi
- Other tasks
  - Do the KK folks have a different K spectrum then the singles?
  - Other??

Comment before QM - Bill

- It would be very useful if someone could volunteer to take on the job of compiling a systematic data-to-data "comparison book" of all STAR and PHENIX measurements. …The various charged spectra at 200 GeV would be the best place to start, as they are most relevant to the current questions.

Compilation of info

- All analysis notes

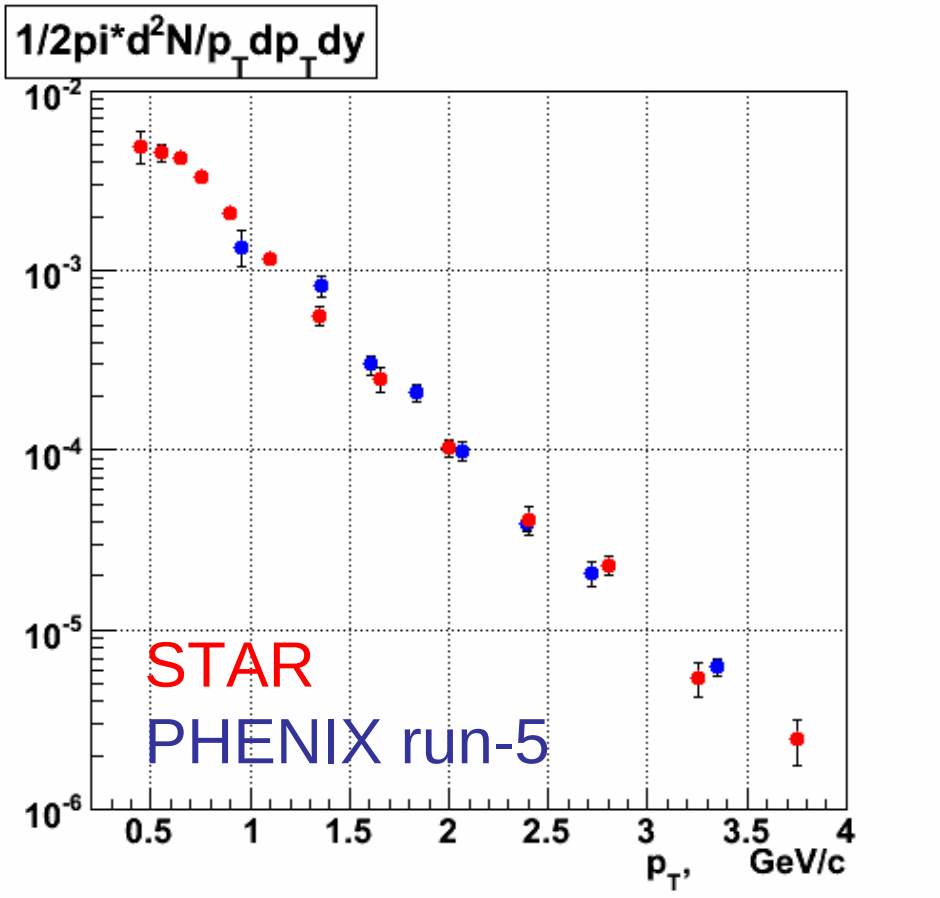
- Official figures and status in collaboration
- New figures with hopes of receiving prelim or final status
- All relevant talks

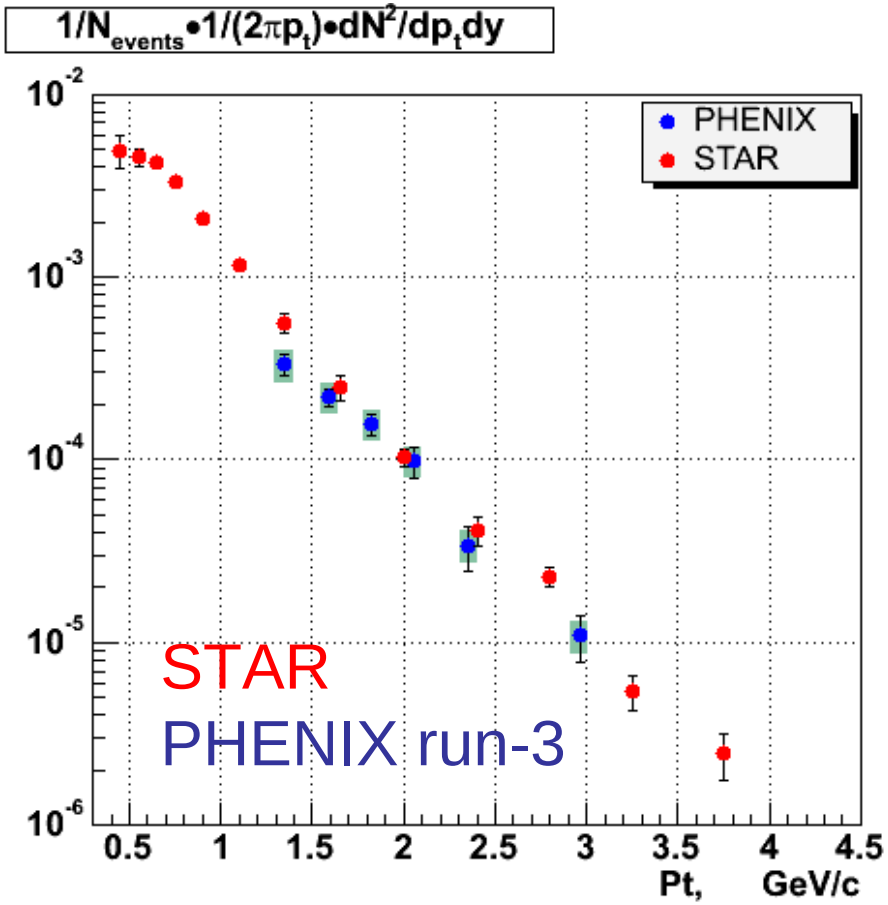
- NEXT MEETING?

Dmitri’s slides – on the phi puzzle

For reference

Phi->KK in p+p: PHENIX vs. STAR





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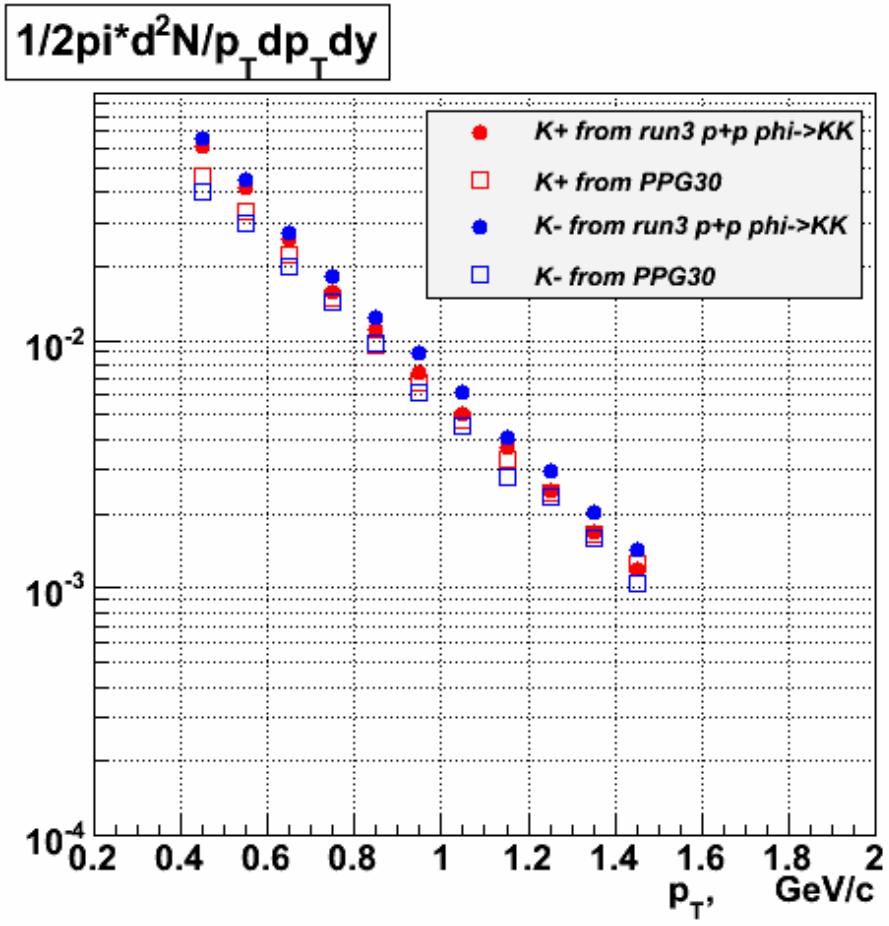

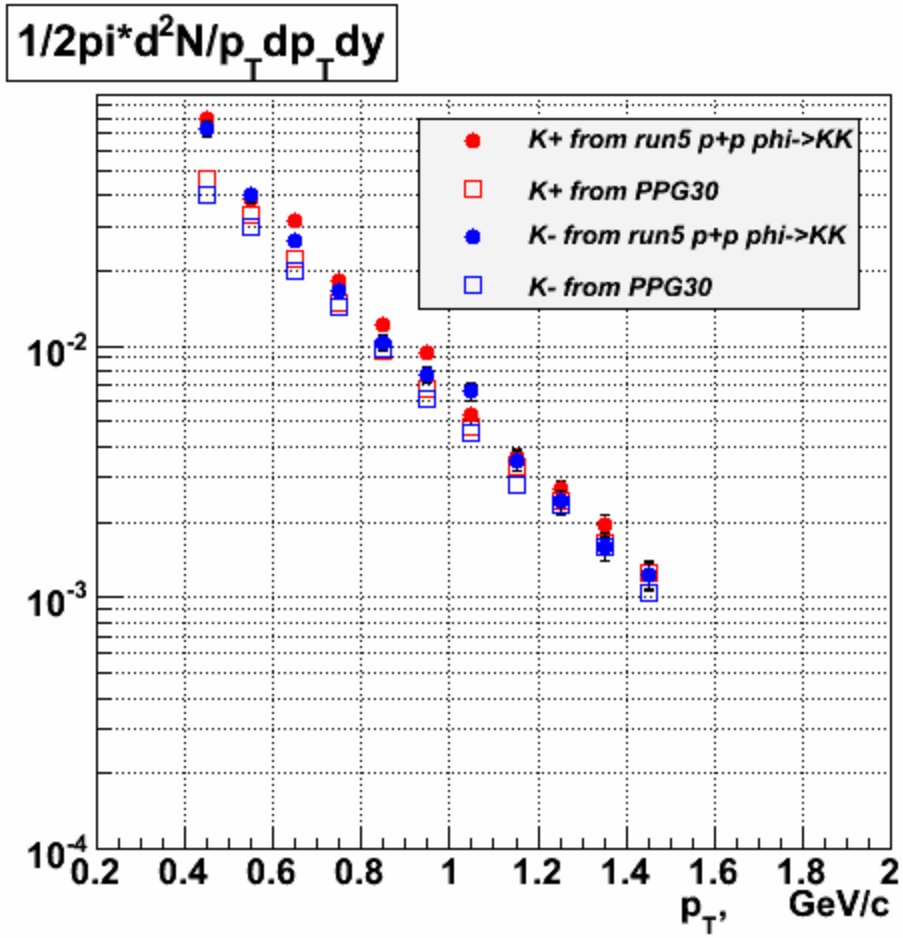

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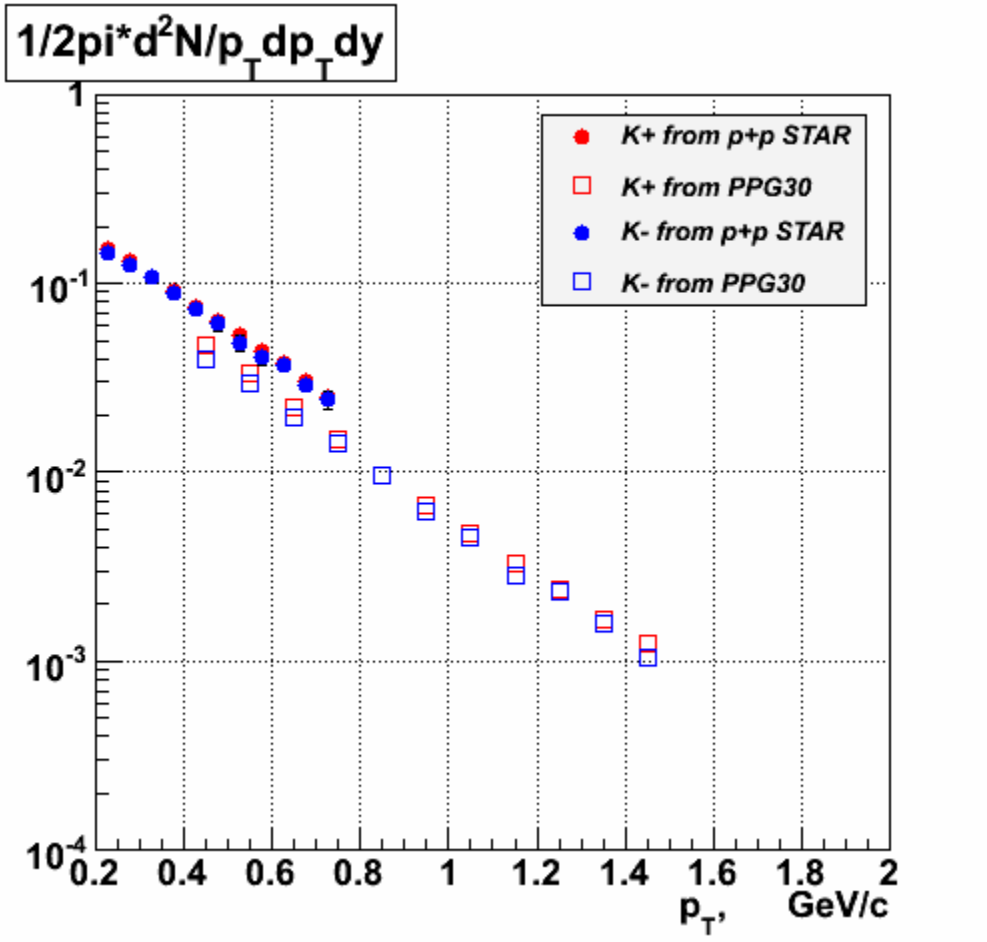
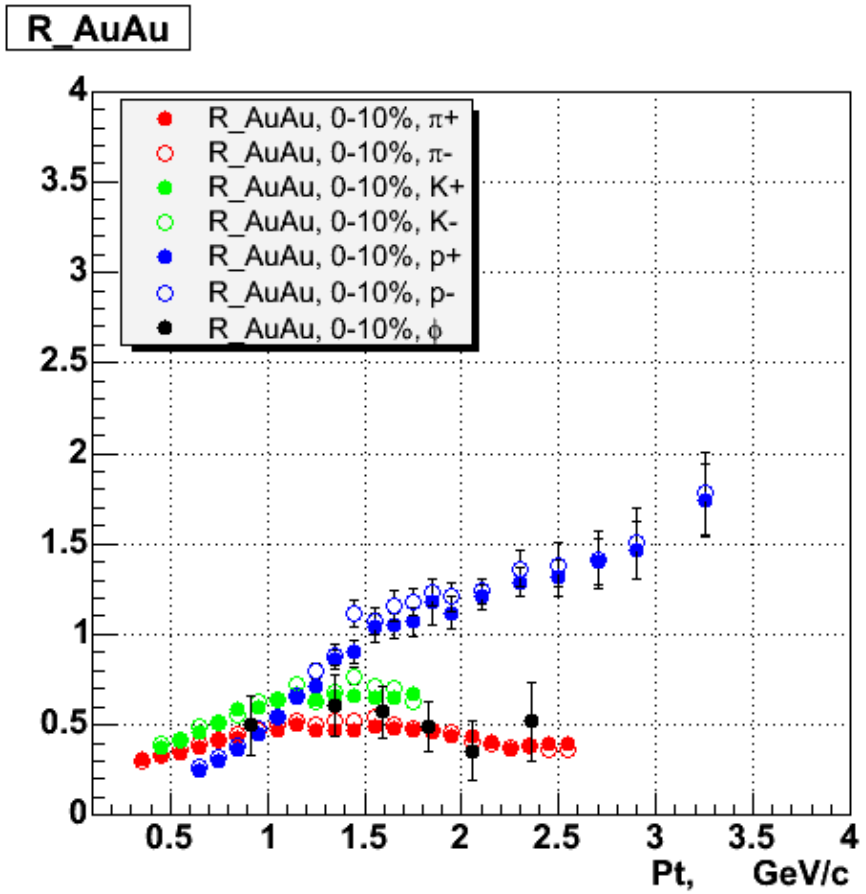
Kaons: PHENIX vs. STAR



Comparison of R_{AuAu} of Phi Meson with Single Charged Hadrons



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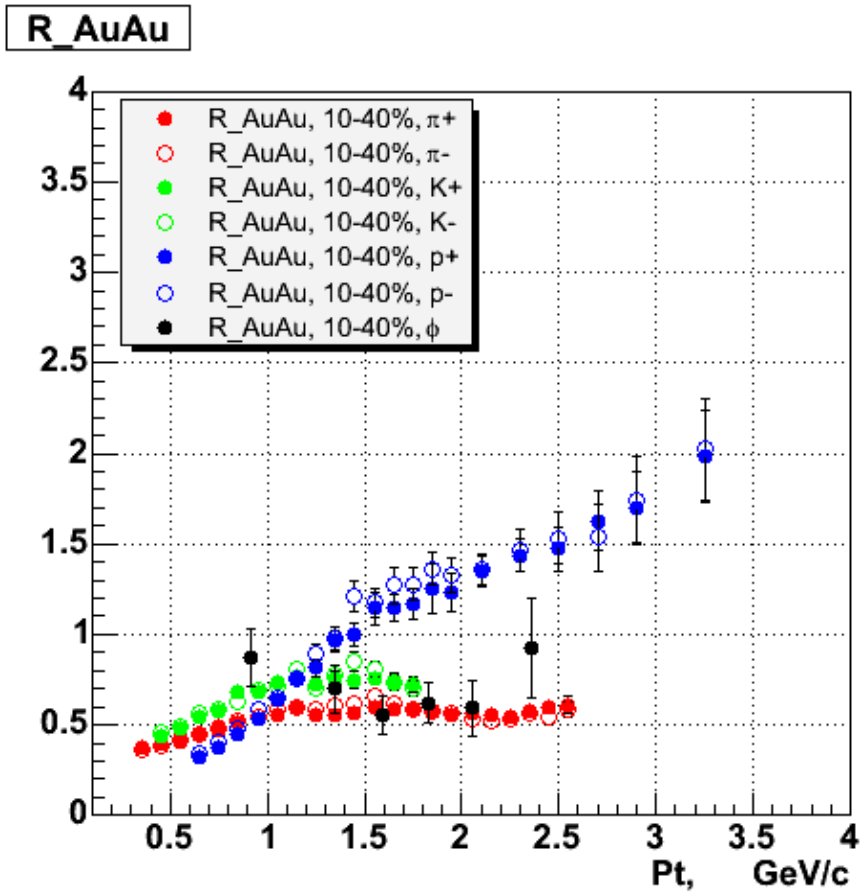

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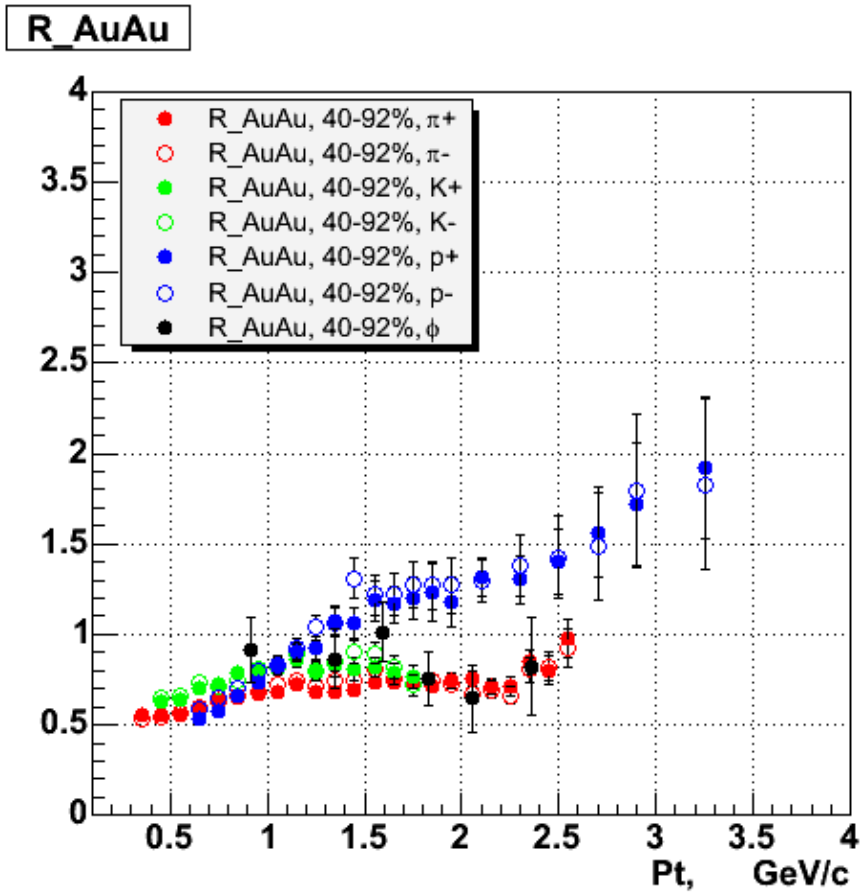

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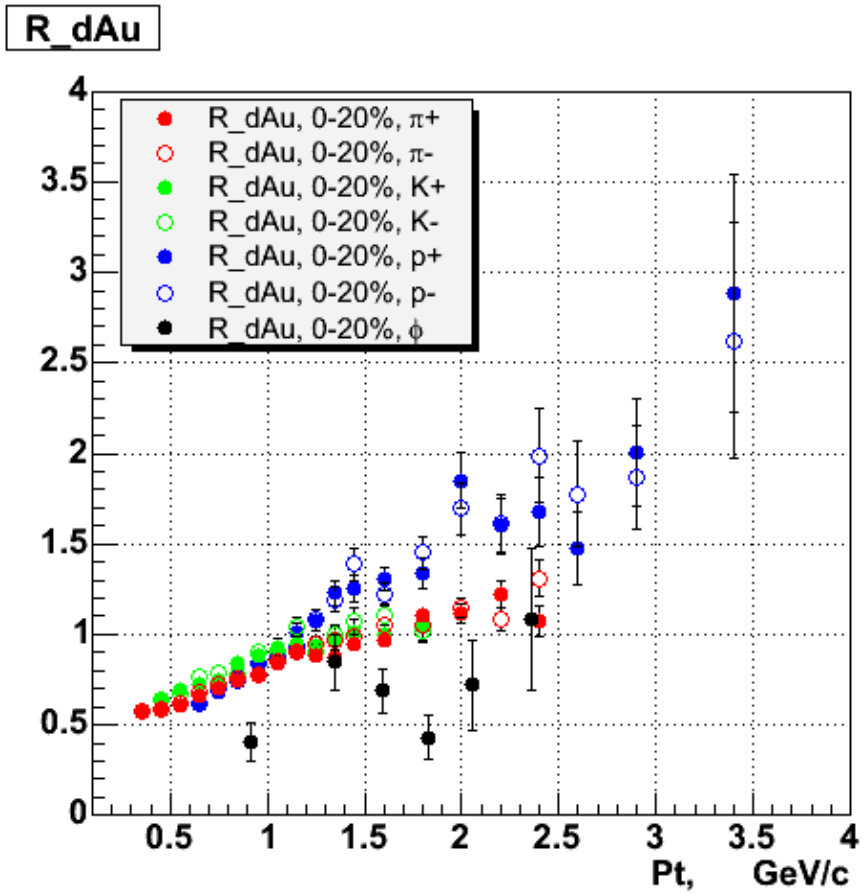

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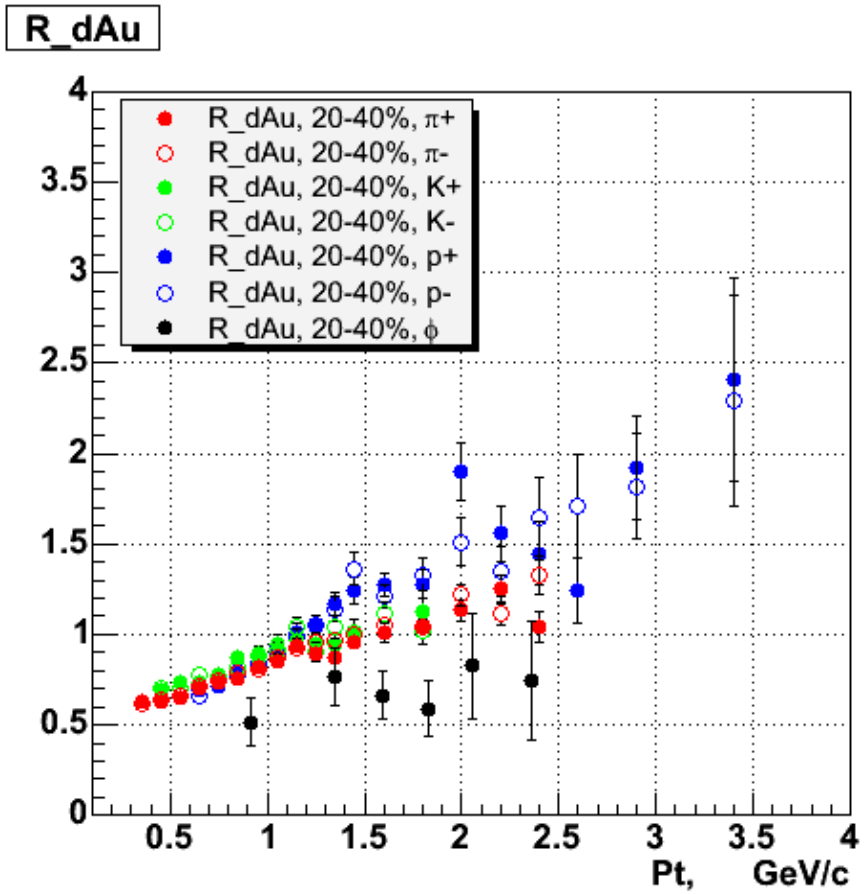

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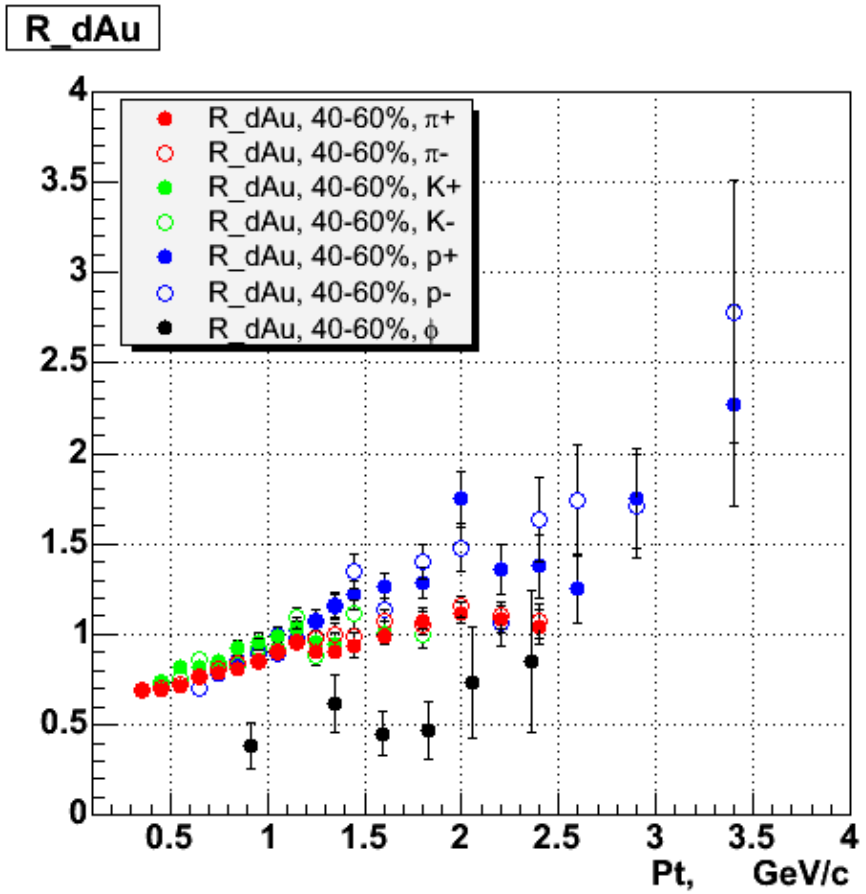

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