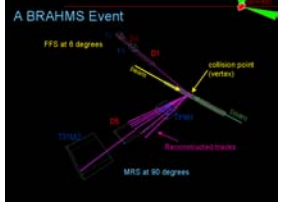
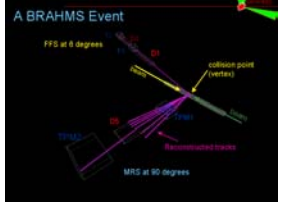


Brahms pp plans

Brahmus / BrhaMos google* search result..

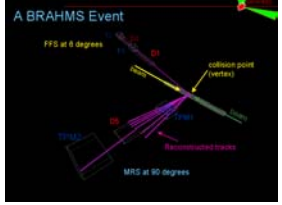
obviously not Brahms

* Investigated due to question from M.Baker



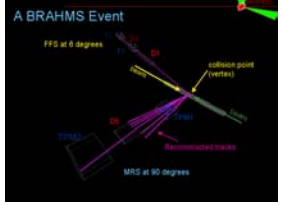
BRAHMS Run-5 pp Plans
F.Videbœk, BNL

- RBUP requested for 2pb^{-1} of polarized pp (polarization > 45%) to measure SSA at moderately large x_F for pions.
- Collaboration have argued to have another round of measurements of pp (un-polarized) spectra at selected rapidities, in particular reference spectra at η~1, 2 and 3.
- Physics goals
  - Single Spin Asymmetries
    - π +- at $\eta \sim 3.5$ ($\theta = 2.3$)
  - Inclusive π, K , p spectra at η~ 1,2 and 3.



Detector Status

- Forward Spectrometer is ready for pp measurements.
- Counters to defined vertex, and min bias for pp collisions will be installed CC1 (used in run-4) and newly build CC2 to ‘catch’ ~ 70% of inelastic cross section.
- MRST0- counter will be reinstalled.
- Spin-lumi-scalers will be re-commissioned (changes to triggers, 110 nsec bunch clock…)



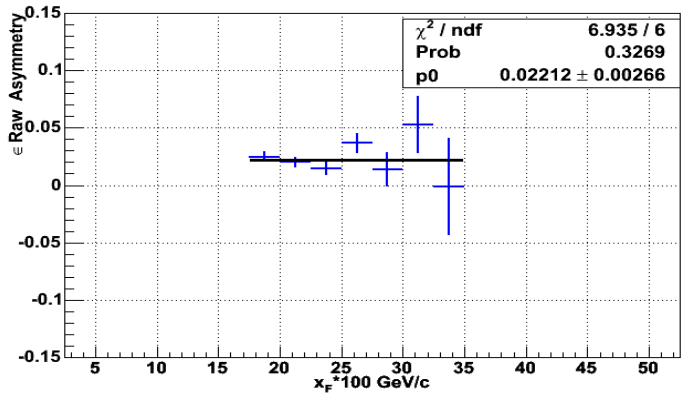
Summary of run-4 result

Goals

Confirm first measurements

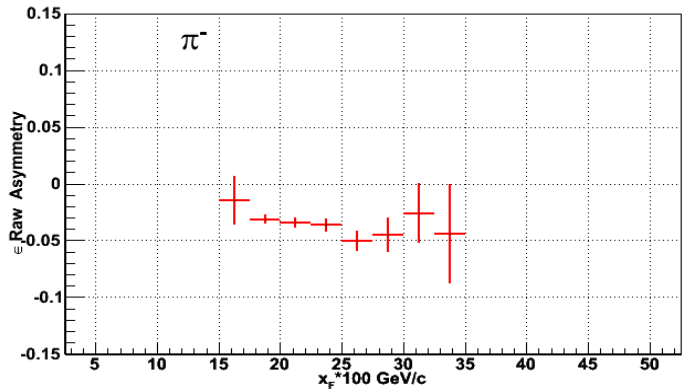
Extend range in Xf, and possibly pt dependence

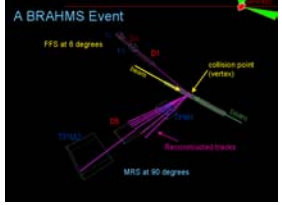
May get SSA for K (in smaller Xf range)



<ε>~ +0.022 => A_N = +0.05 +- 0.005 +- [0.015] in 0.17 < x_F < 0.32

<ε>~ –0.035 => A_N = -0.08 +- 0.005 +- [0.015] in 0.17 < x_F < 0.32





- The total π^- data set was 1.6M trigger 2 over the 95k in this run corresponding to ~ 60 nb-1.
- Our estimate is that we need roughly 10 times this I.e. 600 nb-1 recorded. The fraction to delivered is ~60% (DAQ up+live time) => request per sign is then ~900 nb-1 or .9 pb-1
- With Run-4 luminosities this corresponds to ~6 weeks
- The time for ref. spectra is estimated to ~ 2-3 wks.
- Higher luminosities will allow measurements of K+,K- , albeit in a narrower Xf range than pi's due to PID