Drell-Yan Asymmetry (II)
05/27/2015

- Use beam-dump events as reference, R(phi)
- Use target events as signal, S(phi)

- Asymmetry(phi) = S(phi)/Ref(Phi)

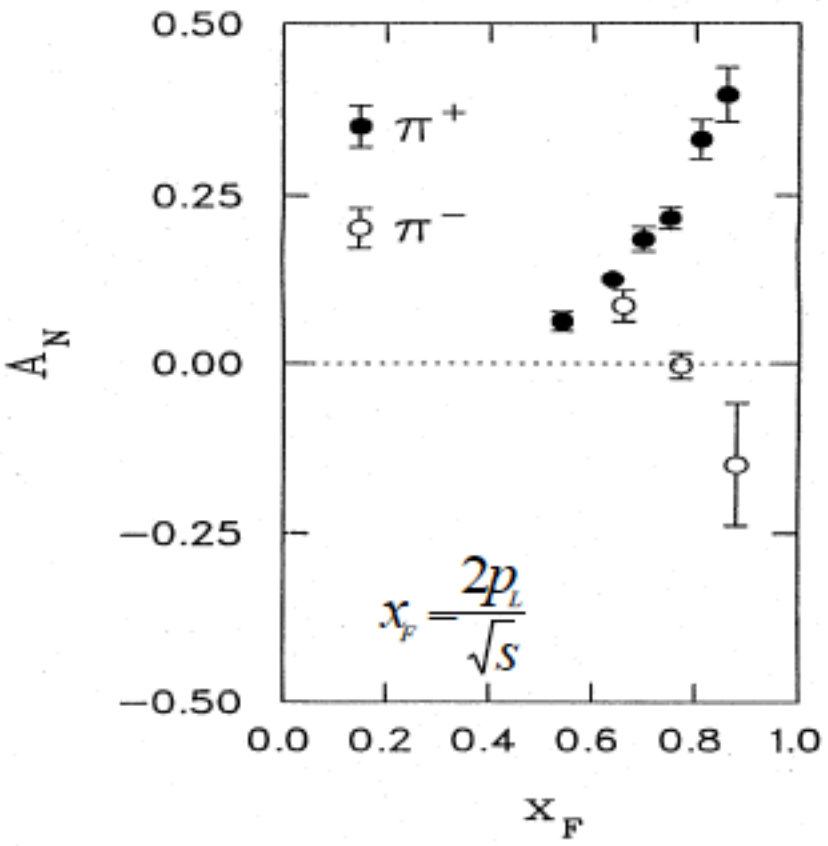
- This is a follow up of previous discussions about DY spin asymmetry measurements

https://p25ext.lanl.gov/elog/Drell-Yan/29

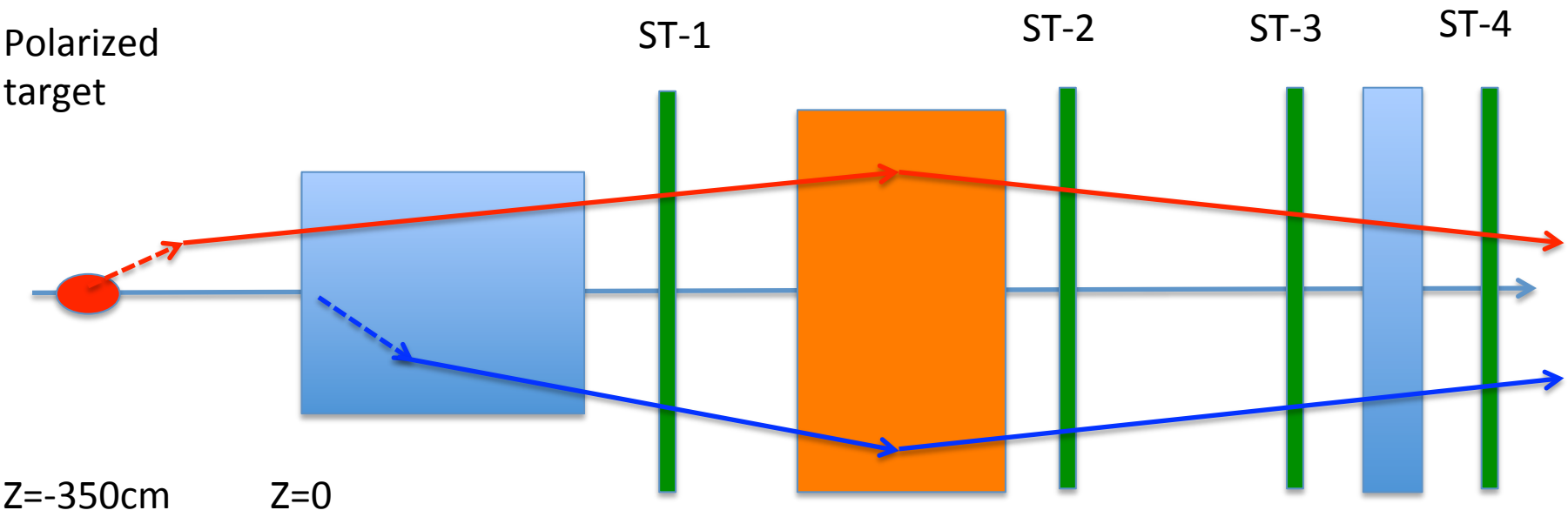
https://www.phenix.bnl.gov/WWW/publish/mxliu/E906/LDRD-Pol-DY-Work-2015-Ming.pdf (pptx)

Confirm positive signals from charged hadrons h+/-

- Targer @ Z= -350cm
- Decay muons from charged pi+/- and K +/-
- Confirm positive signal from mu+ and mu-
- Asy (phi) = S(phi)/Ref(phi)
- Need to rum full MC to simulate
  - Single mu+/- from pi/K decays
  - Kinematics and single muon trigger optimization
  - Improve DAQ from 1kHz -> 10(100)kHz



Experimental Layout for Single Muon Positive Signals



1. Tag: single muons from pi/K decays
   - from target and beam dump
2. Trigger: single muons
   - high statistic single muon to provide positive AN signals
   For mu+ and mu-

Summer work

- Install telescopes
  - Check rates
  - Coverage of x2
- DAQ upgrade?
  - 1kHz -> 10kHz (100kHz?)
- Single muon triggers
  - Large x_2, or low momentum muons, pZ
  - New trigger map
- New MC framework – root based analysis
  - Single muon MC to optimize AN(Mu+) and AN(mu-)
  - Trigger optimization