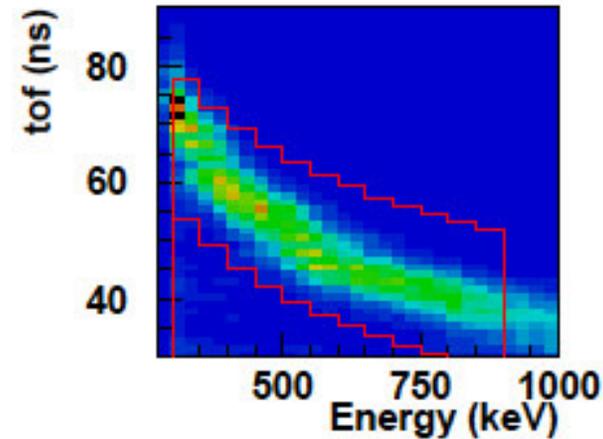
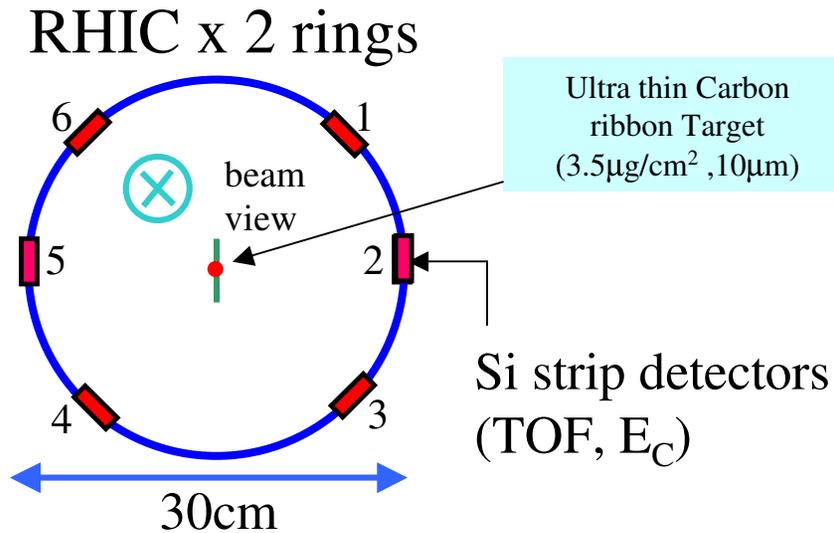


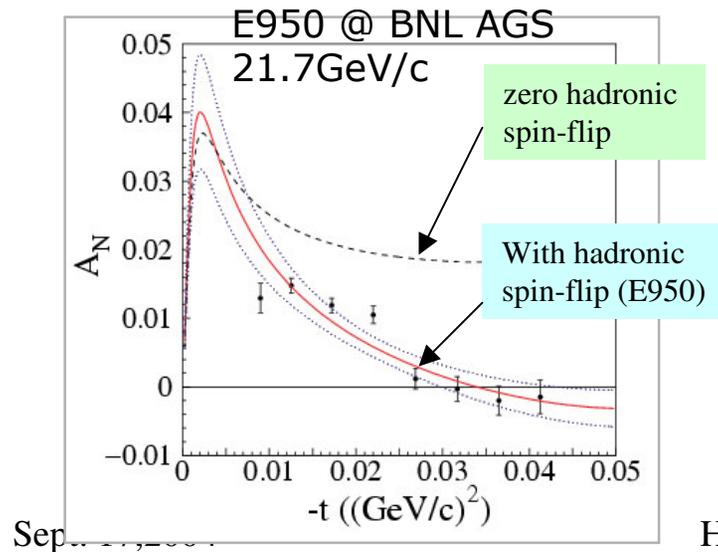
CNI Polarimeter



- Measuring the recoil carbons from $p^\uparrow C \rightarrow p^\uparrow C$
- Carbon identification by kinematics cut (banana cut)

$$P_B = \frac{\epsilon_{LR}}{A_N}, \quad \epsilon_{LR} = \frac{N_L - N_R}{N_L + N_R}$$

$A_N \approx 0.015$ originates from anomalous magnetic moment of p



Haixin Huang

Polarimeter Intensity Dependence

- We already have polarization data of high intensity and low intensity but have not taken systematic data set.
- Inject two or three different bunch intensities.
- Measure polarization for different bunches at store energy.
- Information needed:
 - BPM data near polarimeter;
 - WCM info;
 - IPM measurement;
 - Polarization for different bunch sets.

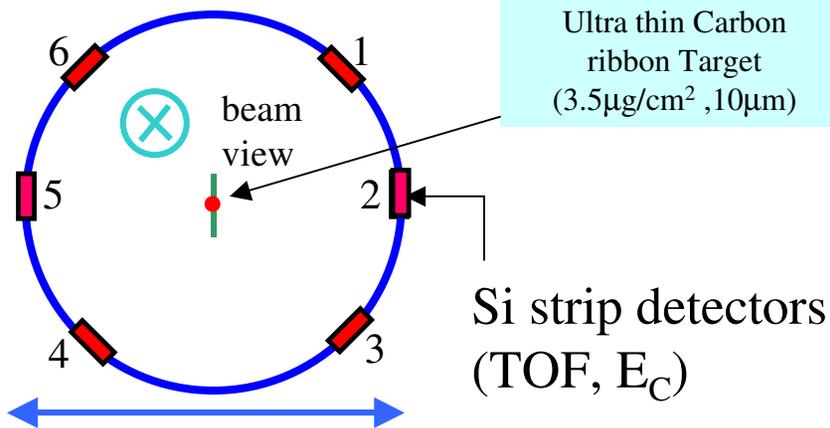
Target width dependence

we usually neglect the thickness of the target from analysis.

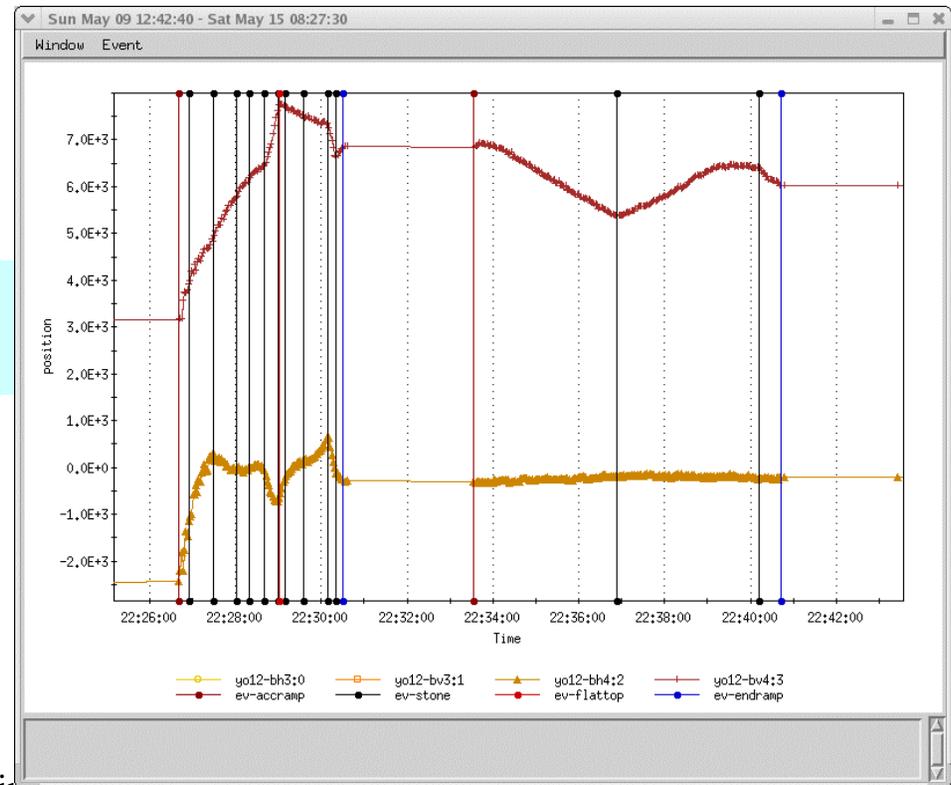
We want to see the difference when using different width targets with the same beam, but this may be tangled with intensity dependence.

Polarimeter Beam Position Dependence

Due to the small analyzing power, any off-centered interaction point would contribute to the false asymmetry. Measure polarization as the effect when the beam is off by $\pm 5\text{mm}$ (or $\pm 2\text{mm}$) from center in horizontally or in vertical or in both.



Sept. 17, 2004



Haixin Huang

Reading of BPMs near Q4: \sim moving of 2-4mm.