SPIN@U-70

Analyzing Power measurement in $p - p$ elastic scattering:

$$p \; + \; p_\uparrow \; \longrightarrow \; p \; + \; p$$
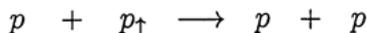
$P_\perp^2$	P_B	P_T	P_F	θ_F	P_R	θ_R
[GeV/c]²	[GeV/c]	[GeV/c]	[GeV/c]		[GeV/c]	
1	70	0	69.5	0.83°	1.14	61.4°
6	70	0	66.6	2.11°	4.20	35.7°
12	70	0	62.9	3.16°	8.01	25.6°

Extracted beam interaction with target:

Solid PPT

to recoil spectrometer

p_{recoil}

p_{beam}

U-70 beam

$p_{forward}$
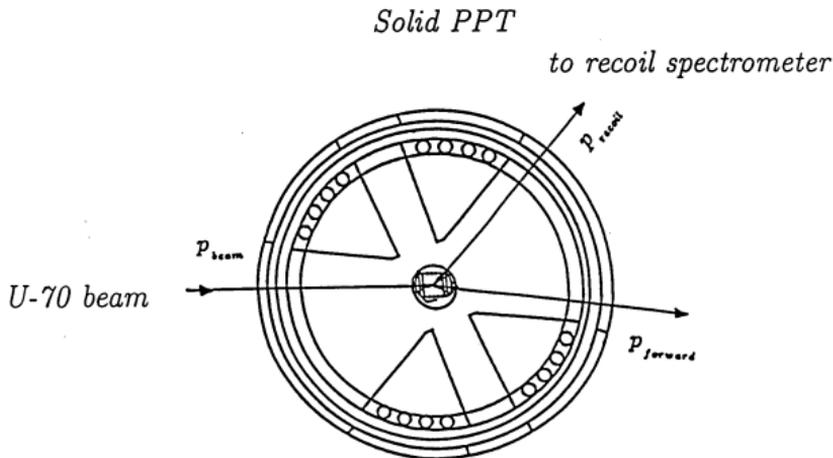
Beam height: = 10 mm
Beam width: = 10 mm
PPT length: = 36 mm

$$A_n = \frac{A_{meas}}{P_T} = \frac{1}{P_T}\left[\frac{N_\uparrow - N_\downarrow}{N_\uparrow + N_\downarrow}\right]$$