

CM-P00047652

STUDY OF \bar{p} -NUCLEUS INTERACTION
WITH A HIGH RESOLUTION MAGNETIC SPECTROMETER

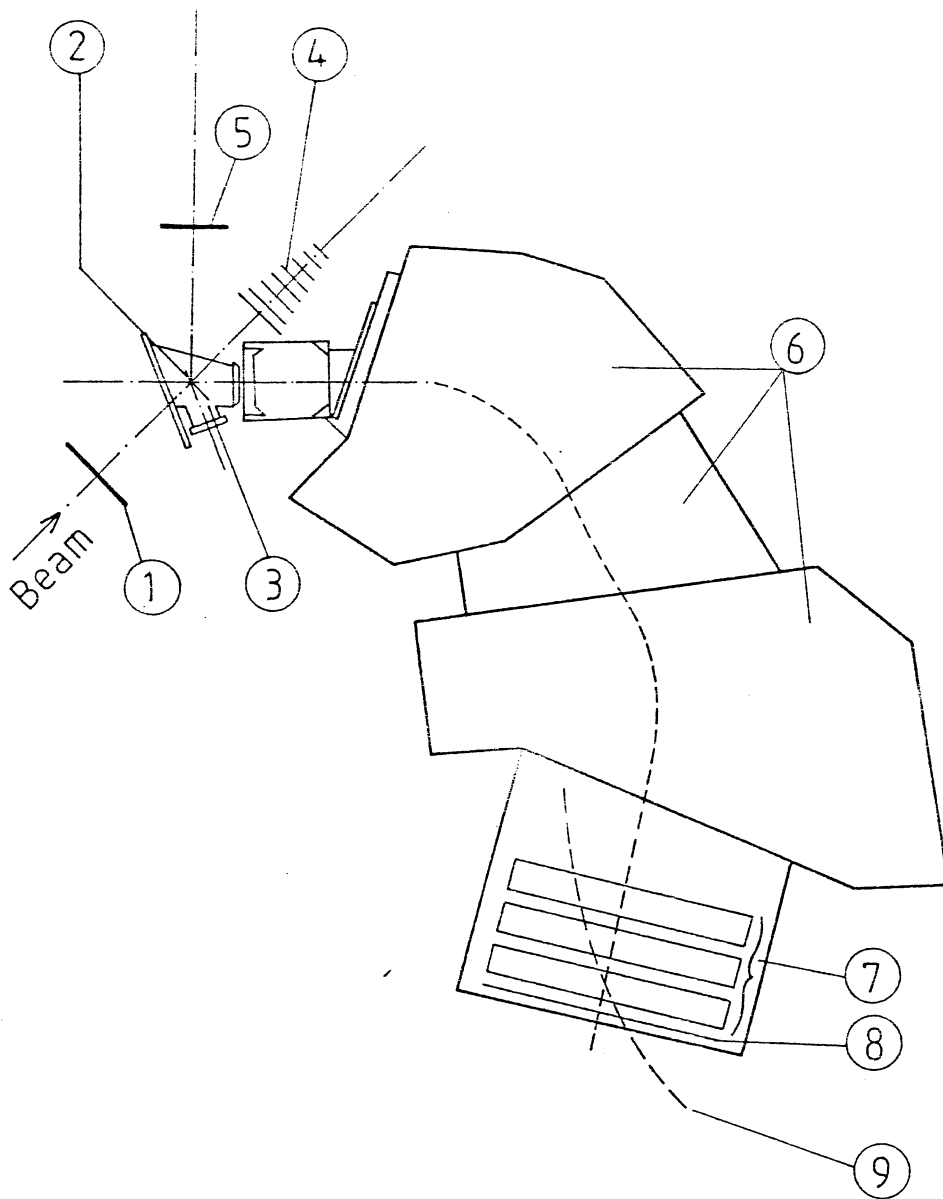
E. Aslanides², O. Bing², P. Birien¹, G. Bruge¹,
H. Catz¹, A. Chaumeaux¹, J.M. Durand¹, D. Garreta¹,
B. Mayer¹, J. Mougey¹ and A.I. Yavin³

We propose to use the high resolution, large solid angle and large momentum acceptance magnetic spectrometer SPES II to study the interaction between \bar{p} and complex nuclei in the following experiments :

- 1) $A(\bar{p}, \bar{p})A$. Angular distribution of \bar{p} elastically scattered from ^{12}C , ^{40}Ca , ^{90}Zr and ^{208}Pb .
- 2) $A(\bar{p}, \bar{p}')A^*$. Excitation energy spectra and some angular distributions of \bar{p} inelastically scattered from ^{12}C , ^{40}Ca , ^{90}Zr and ^{208}Pb up to an excitation energy of ≈ 100 MeV.
- 3) $A(\bar{p}, p)A_{Z-1, \bar{p}}$. Excitation energy spectra for knock out reaction on ^6Li , ^{45}Sc , ^{123}Sb and ^{209}Bi at several angles.
- 4) Analysing power for elastic scattering of \bar{p} from ^{12}C , ^{40}Ca , ^{90}Zr and ^{208}Pb at small angles.
- 5) Total cross section for \bar{p} interaction with the targets mentioned above, by the usual transmission technique.

Any beam momentum between 600 MeV/c and 800 MeV/c will be suitable for this experiment.

DPh-N/ME - Saclay ¹⁾
CRN - Strasbourg ²⁾
Tel Aviv University ³⁾



- General lay-out of the experimental set up.

1. In beam monitor and TOF start thin scintillator.
2. Target
3. Target vacuum chamber
4. Total cross-section measurement counter.
5. Coincidence counter
6. SPES II Spectrometer
7. Multiwire chambers
8. Scintillator hodoscope
9. Horizontal focal surface