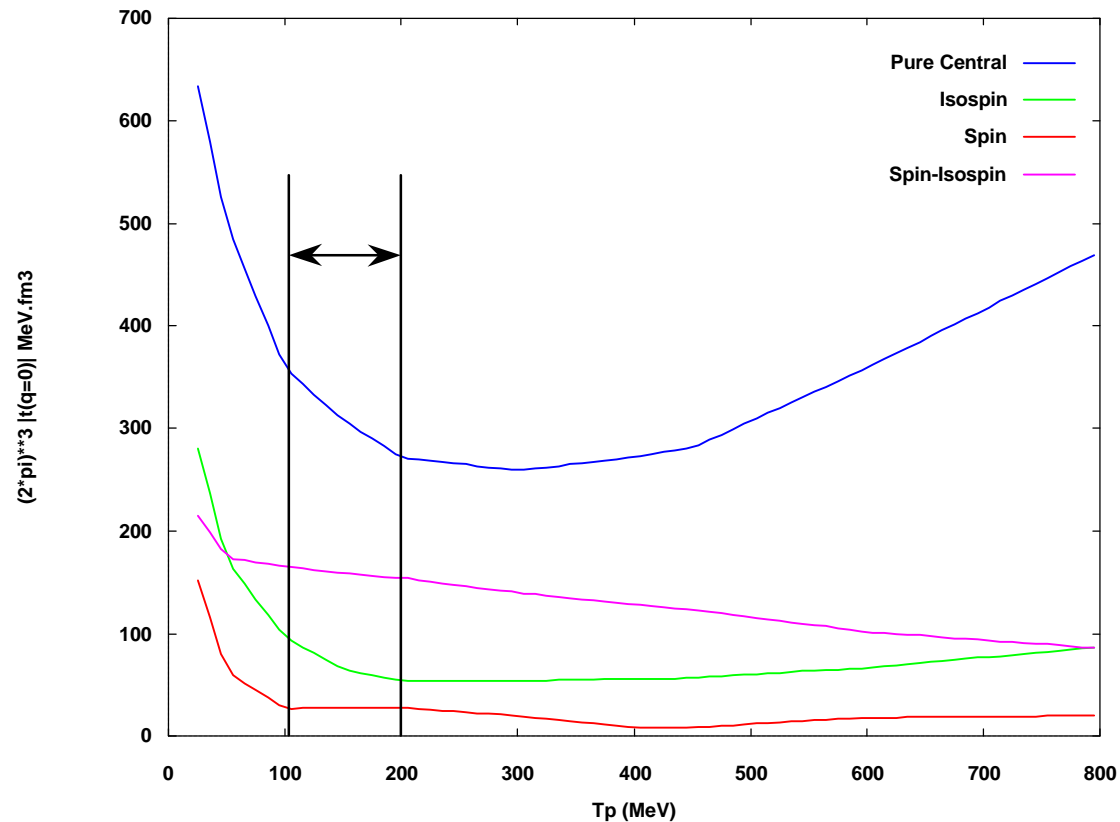


# Proton elastic measurements at AGOR in the range 120-200 MeV

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- During the past a lot of experimental work has been done on medium energy protons elastic scattering, but mainly on "easy" spherical nuclei.
- Very few data on deformed nuclei.
- Few measurements of  $A_Y$  (*few polarized beams*).
- For the motivations, refer to the talk of A. Koning and J.P. Delaroche.

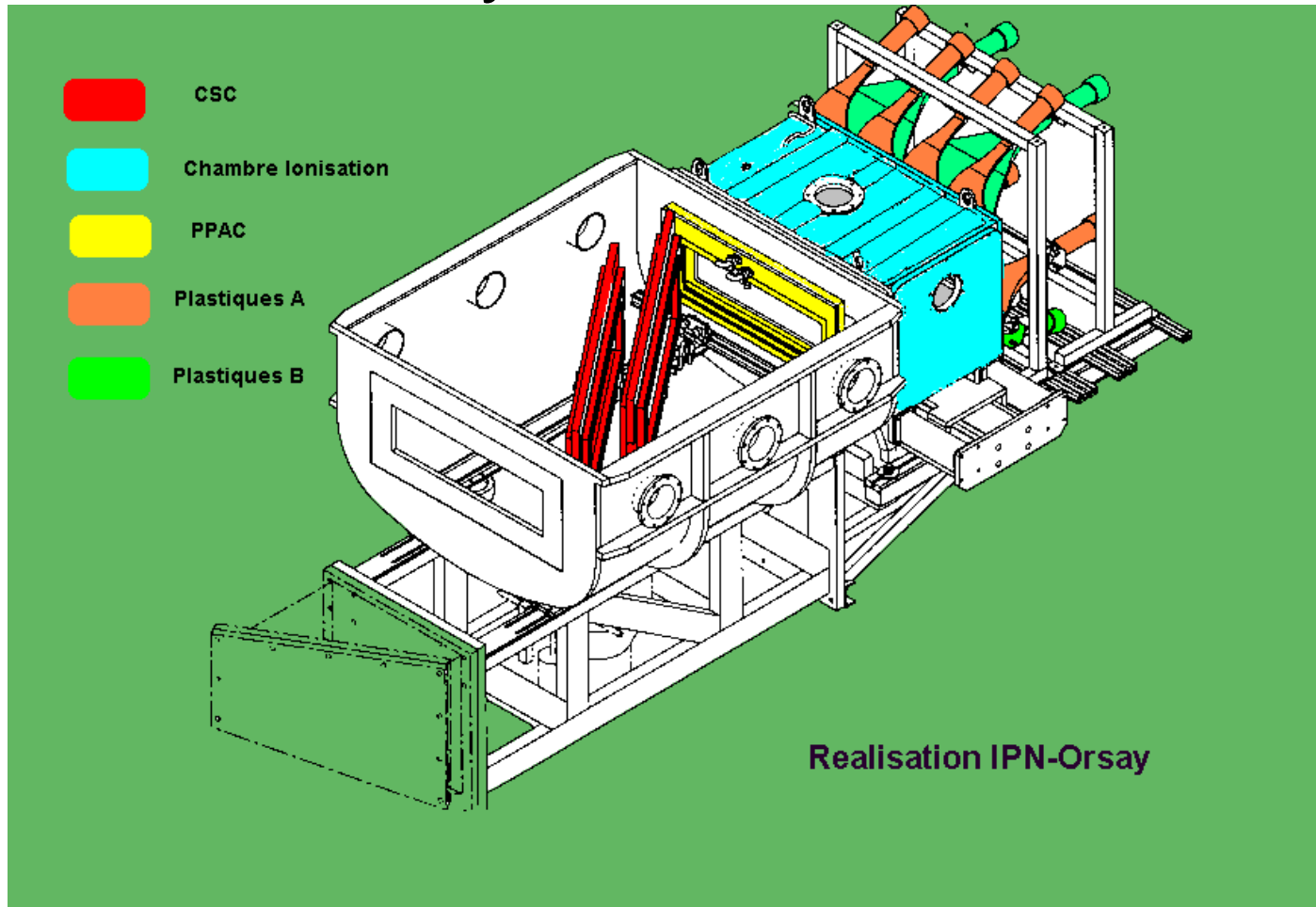
In the N-N interaction, from 100 to 400 MeV the central part is near its minimum. Spin term are relatively important.



Experiment proposed at Agor  
(KVI-Groningen - The Netherlands)  
at polarized proton energies 130,150  
and 190 MeV.

$^{27}_{13}\text{Al}$   $^{100}_{42}\text{Mo}$   $^{152,154}_{62}\text{Sm}$   $^{184}_{74}\text{W}$   $^{232}_{90}\text{Th}$   $^{238}_{92}\text{U}$

## The detection system



Measurements to be taken from  $5^\circ$  to  $60^\circ$

$$\frac{d\sigma(\theta)}{d\Omega}, \quad A_y(\theta)$$

- Total BBS horizontal aperture:  $\pm 1^\circ$  (binned  $0.2^\circ$ )
- Absolute monitoring on Nucleon-Nucleon ( $\text{CH}_2$ )
- Already existing targets  $^{100}_{42}\text{Mo}$   $^{152,154}_{62}\text{Sm}$   $^{184}_{74}\text{W}$
- Could be done end of 1999

*Not yet accepted by the KVI PAC*

*The polarized beam is available.*

*The energy resolution of the line should be improved.*