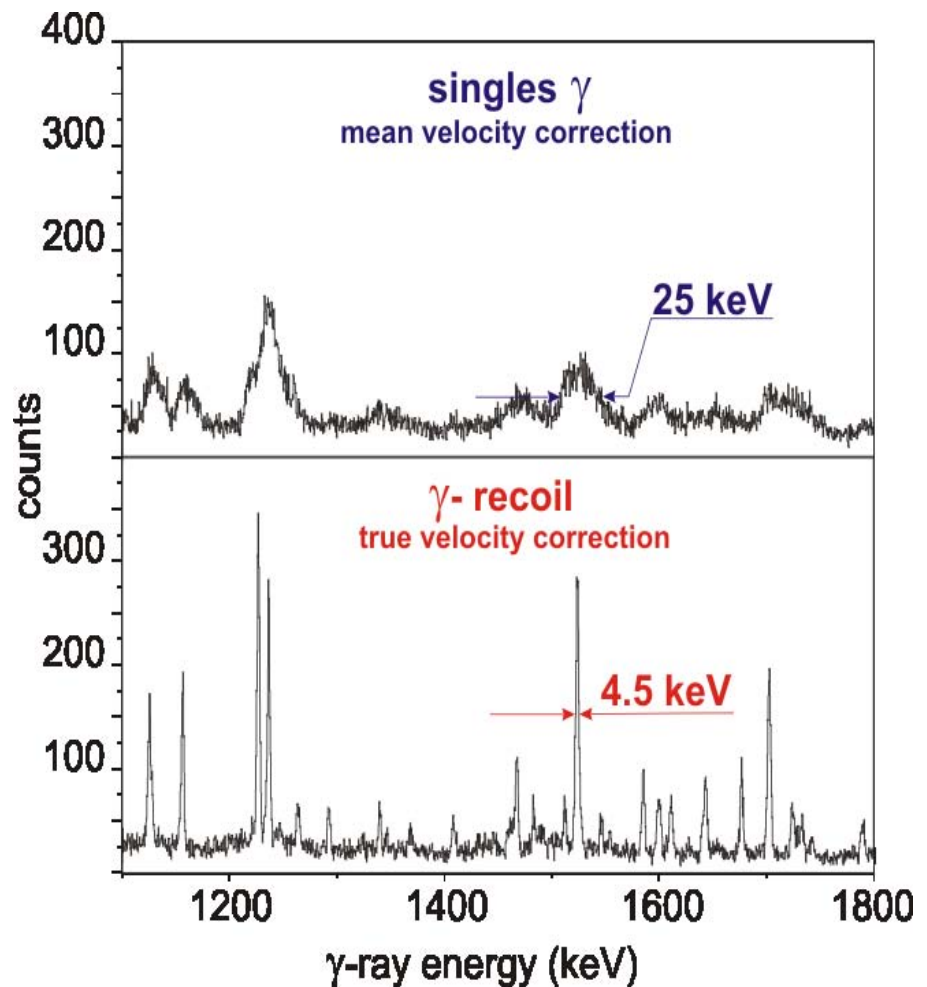


Ancillary Detectors - RFD

■ Features & requirements

- efficiency of γ -recoil coincidences: 20-50%
- $R_0 \sim 2-5$
- precise Doppler broadening correction for recoil velocity up to $\sim 7\%$
- detection angle $1.8^\circ - 6.7^\circ$
- a pulsed beam with a time interval from 100 ns up to 1000 ns with $\Delta\tau \sim 1$ ns
- $\sigma_{\text{fus}} > 50 \mu\text{b}$
- counting rate of the individual recoil detector not higher than 3 MHz
- kinetic energy of a recoil greater than 4 MeV

$^{18}\text{O}(@67 \text{ MeV}) + 0.8 \text{ mg/cm}^2 \text{ }^{30}\text{Si}$



P. Bednarczyk et al., Acta Phys. Polon. B32, 747 (2001)