



# **Basics of radiometry**

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This project has received funding from the European Union's Horizon 2020 research and innovation programme under the Euratom research and training programme 2014-2018 under grant agreement No 754 972





## Radiometry

#### Gamma spectrometry



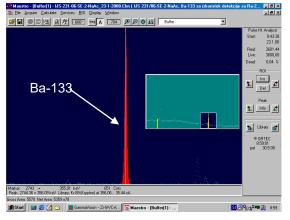
Alpha spectrometry

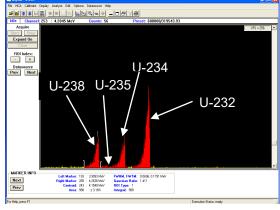


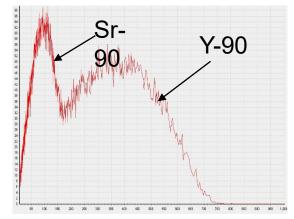
Liquid scintillation counting Proportional counting









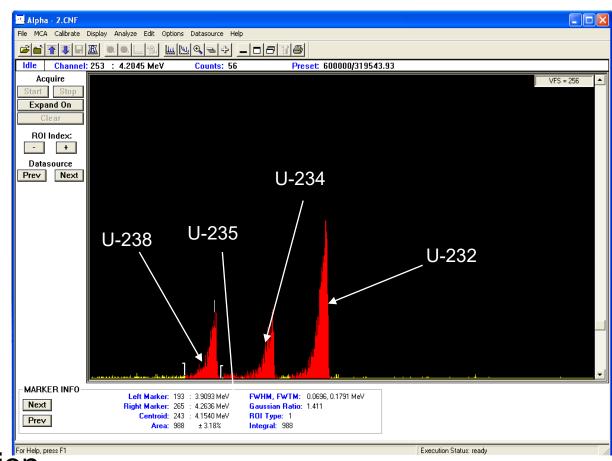






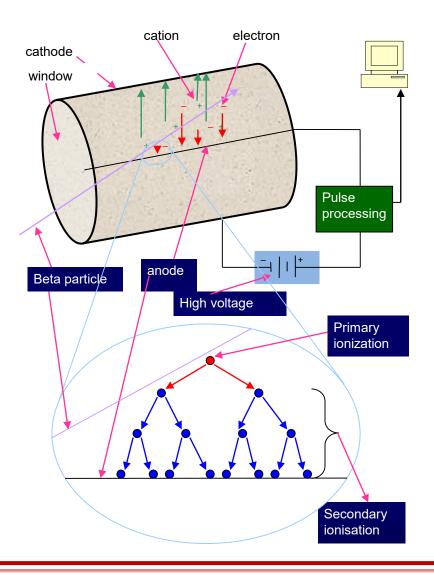
# Alpha-particle spectrometry

- PIPS semiconductor detectors
- Calibration
  - energy
  - efficiency
- Energy range 3-6 MeV
- Low energy tailing
- Importance of radiochemical separation



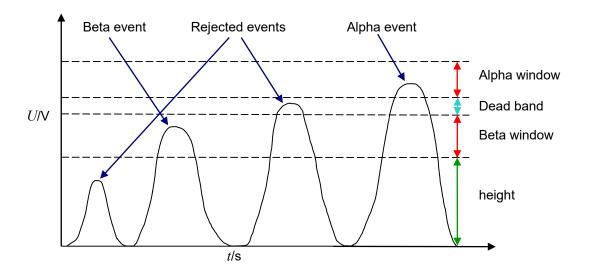






### **Proportional counter**

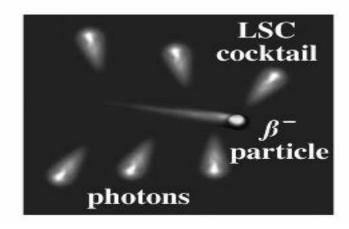
- No spectrum => information only if detected was alpha or beta emitter
- Importance of radiochemical separation

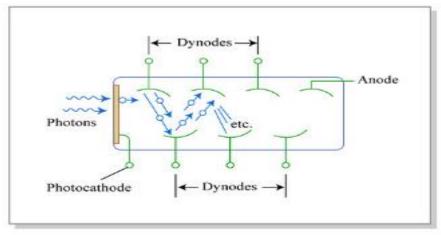


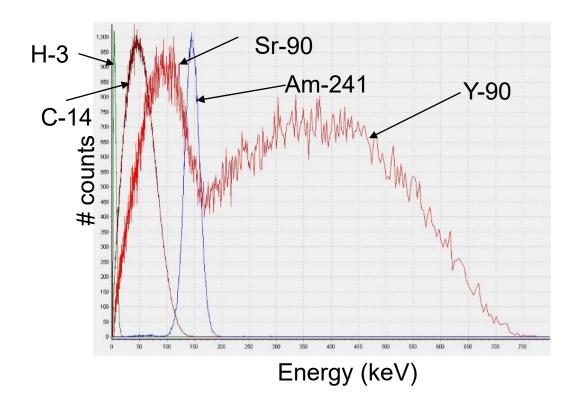




# Liquid scintillation counting





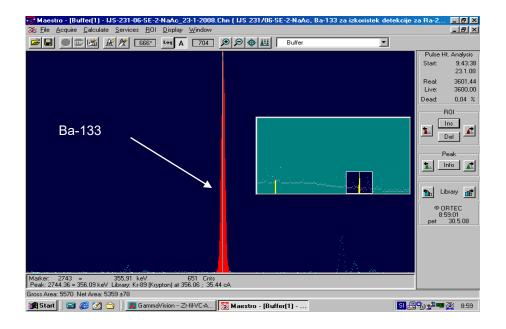






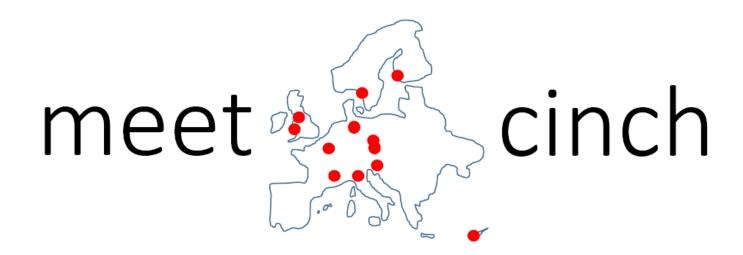
### **Gamma spectrometry**

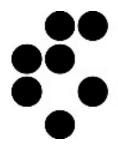
- HPGe detectors
- Calibration
  - energy
  - efficiency











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