

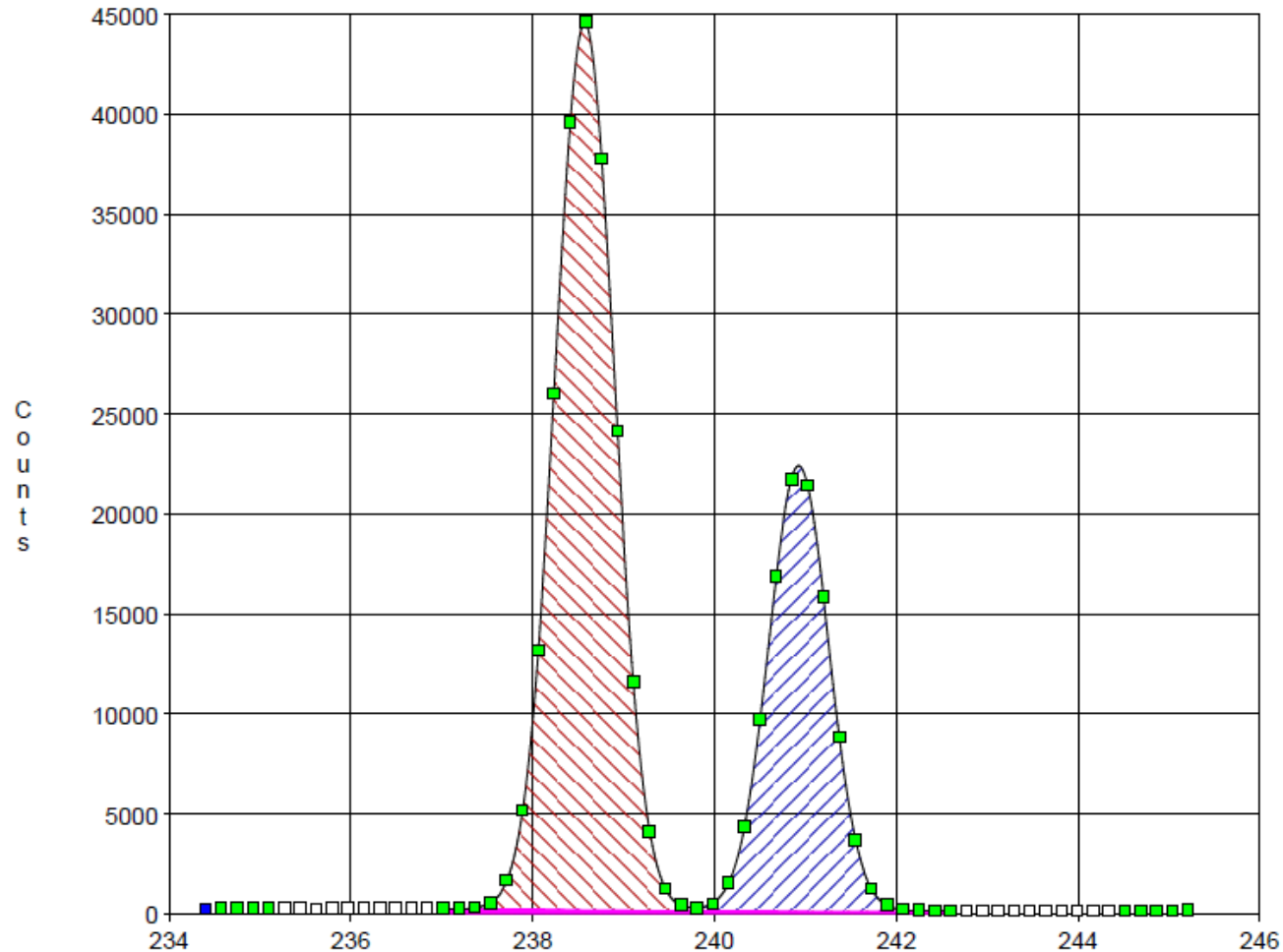
Separation of the gamma-rays 241 keV and 238 keV

Highest intensity gamma-rays from

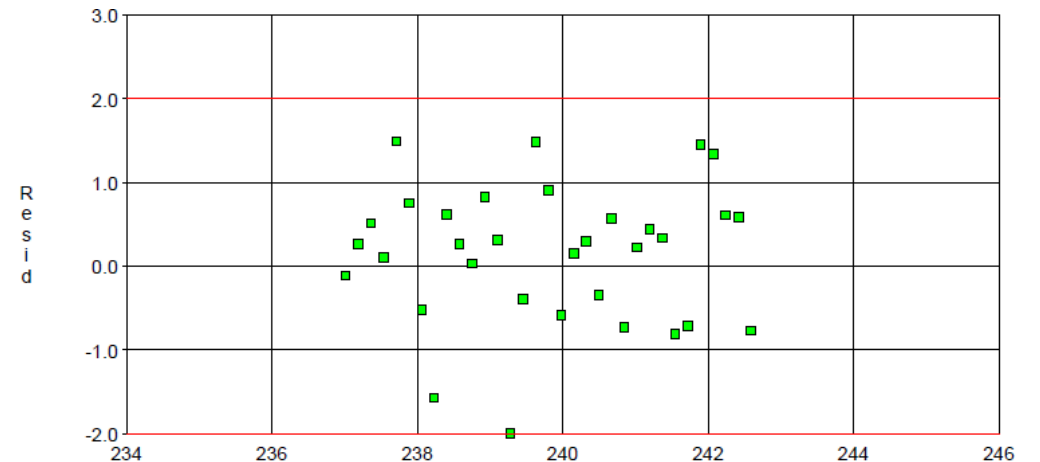
^{224}Ra and ^{212}Pb

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Separation is a non-issue when there is equal activity of the nuclides

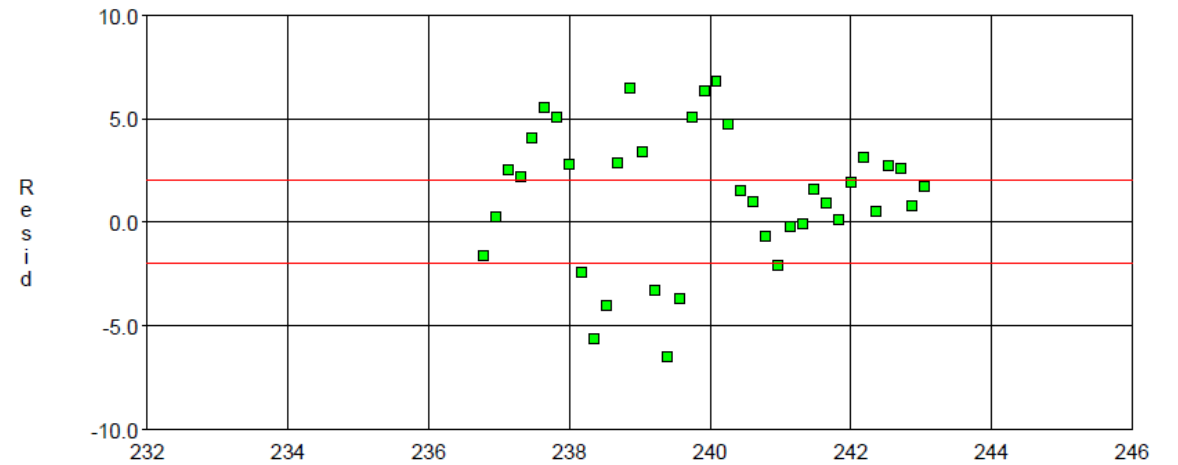
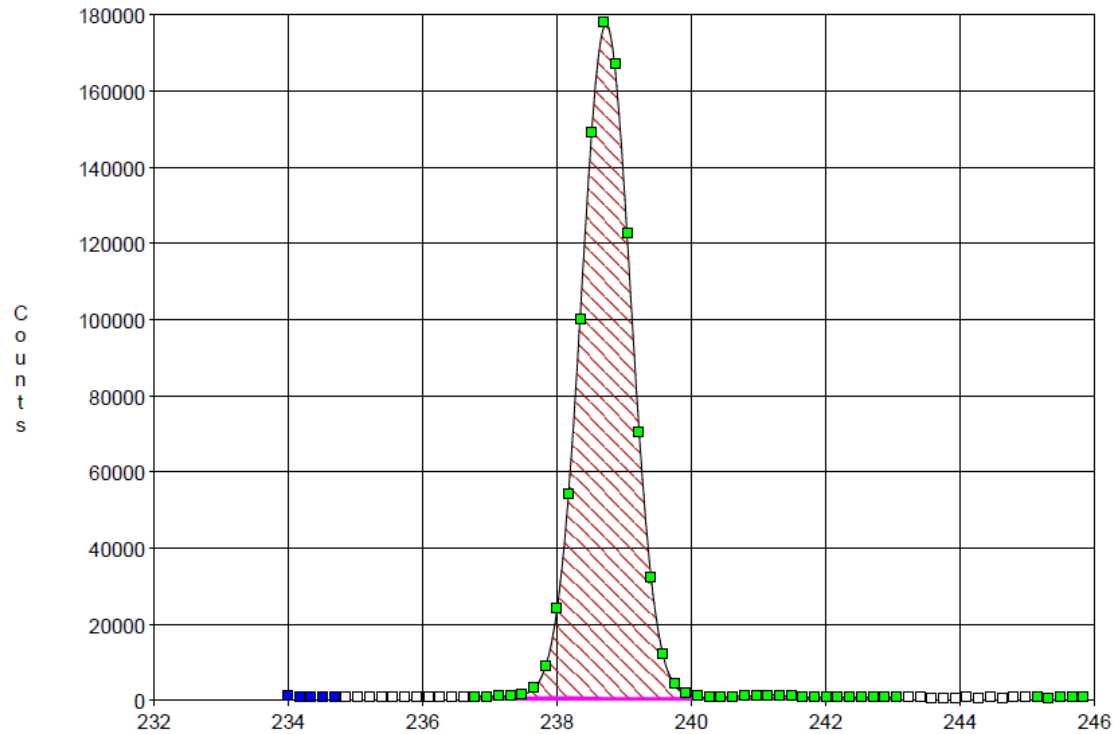


High total activity and if there is a high activity of ^{212}Pb the resolution becomes worse.



A typical problem spectrum

High total activity dominated by ^{212}Pb



How we measure

- 15 minute measurement
- At the end of the working day due to production time
- Measurement using a BEGe
- 8000 channels over 1400 keV
- Software uses apex-gamma software (Genie 2000)

Suggestions

- Let ^{212}Pb decay
- Longer measurement time
- Lower energy window/
more channels per keV
- Chemical separation

Problems

- Analysis time must be “reasonable”
- More channels per keV would need more counts to get a good 241 peak
- Increased complexity increased probability for failure

Are there any other suggestions?

Anything obvious that has not been mentioned?