

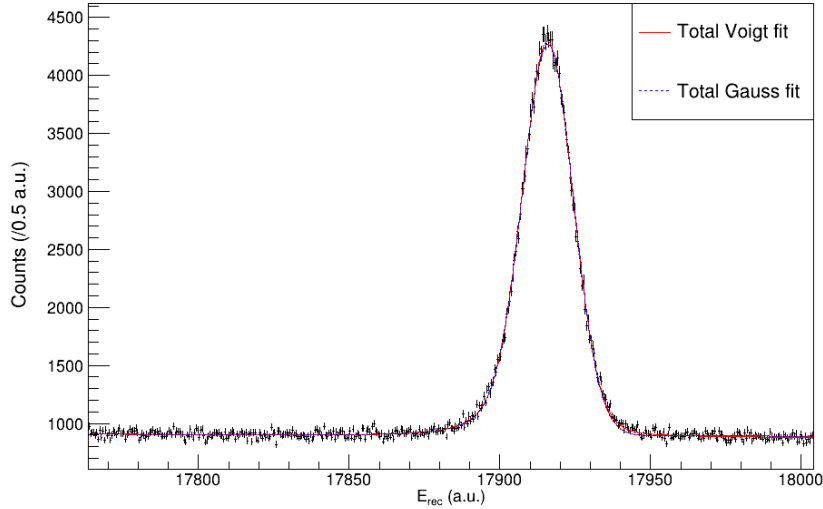
June 20 updates

-Dhanurdhar Bajpai

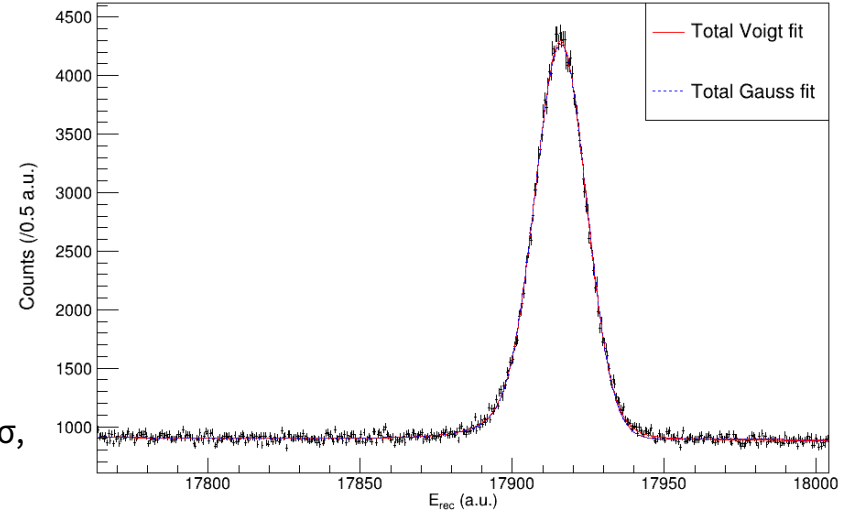
- After further discussion with Andreas on Ba true peak energies and their errors, I'll take the true energies from Schopper as they are measured and more reliable
- At least for now, the errors will be 0.2 keV but we should discuss more on the justification of this number
- For systematic errors on the true peak positions, I'll use:
 - For Eu & Tl peaks, gnp, gw1 and gerda fits
 - For Ba peaks, gw1, gerda, vw1 and voigt (gerda type fit with gaussian peak replaced with voigt peak)

Fit of peaks with residuals, Ba-136 3925.2 keV peak

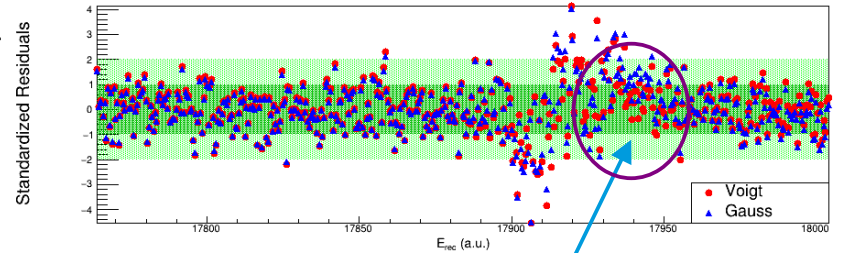
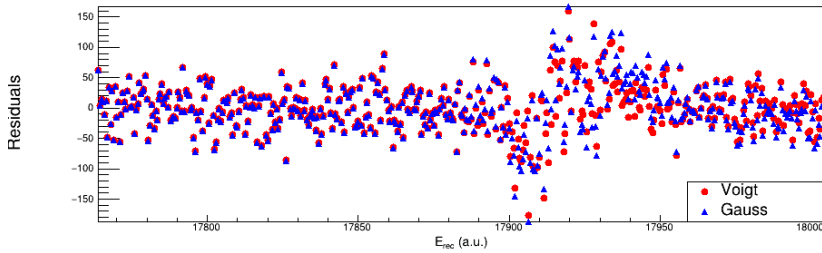
Ba136 Energy Spectrum (Det #2)



Ba136 Energy Spectrum (Det #2)

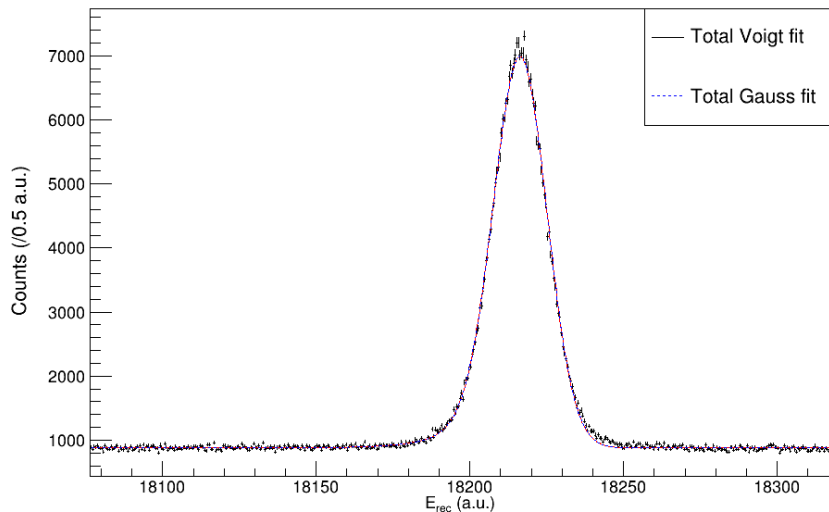


- Standardized residual = residual/ σ ,
- σ is standard deviation of residuals
- Red- χ^2 is better for Voigt peak than Gaussian peak

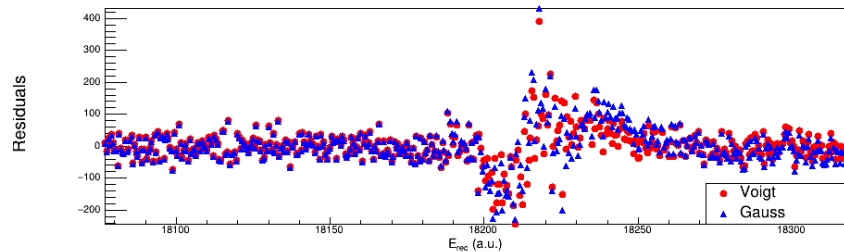
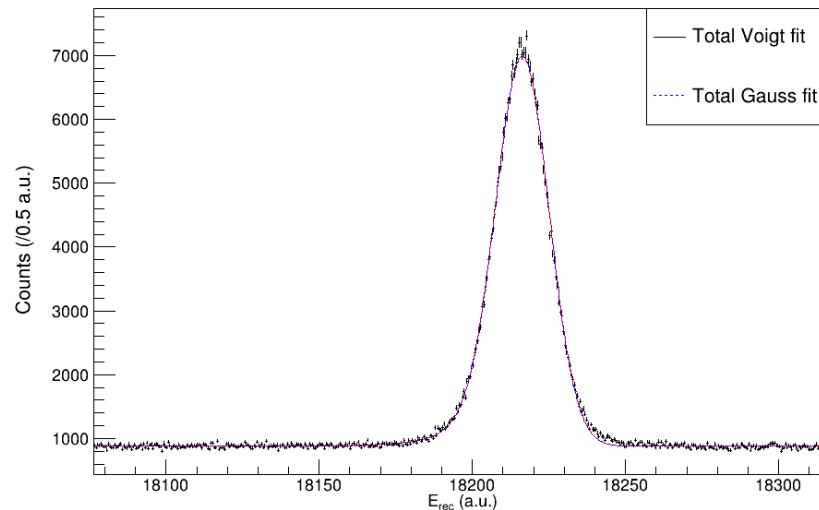


Fit of peaks with residuals, Ba-136 3991.1 keV peak

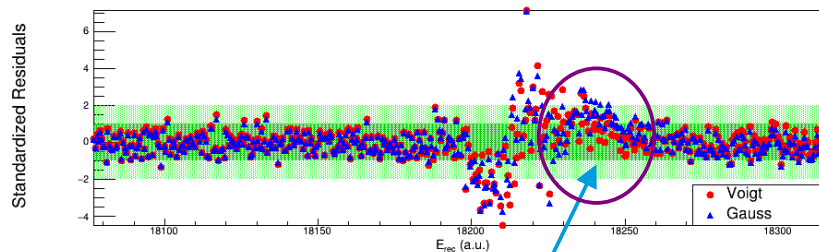
Ba136 Energy Spectrum (Det #2)



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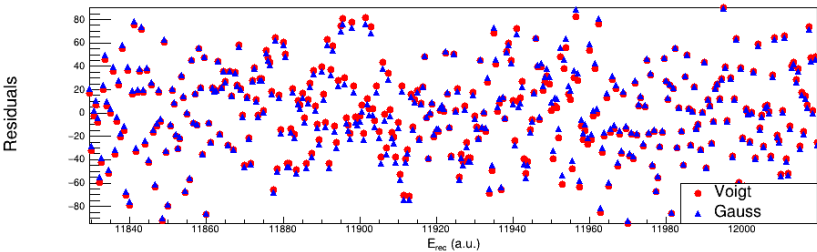
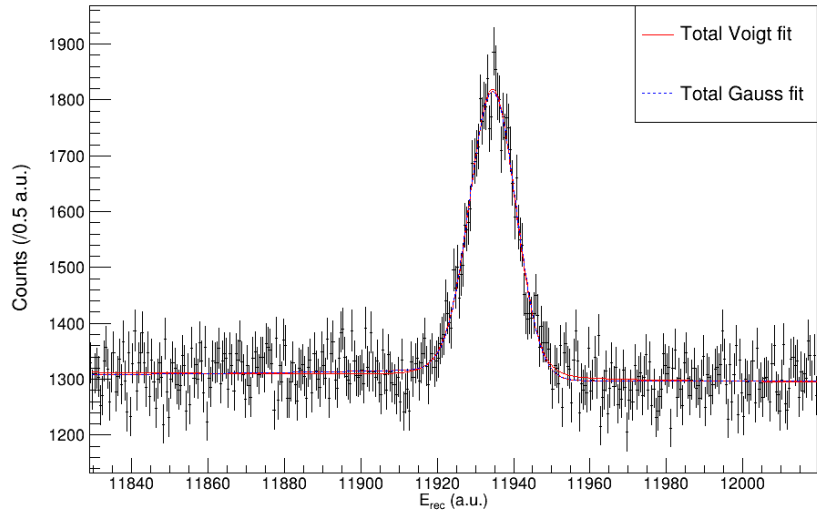


- Red- χ^2 is better for Voigt peak than Gaussian peak



Fit of peaks with residuals, TI-208 2614.51 keV peak

Ba136 Energy Spectrum (Det #2)



- Red- χ^2 is ~same for both peaks, up to $O(1e-2)$

Ba136 Energy Spectrum (Det #2)

