

# E465 HPGe resolution calibration

- **5 grey** points not included due to Doppler broadening
- **7 black** points for linear fit, not a great fit
- $^{56}\text{Fe}(n,\gamma)$  DE and SE behaviour not as expected
- FWHM at 1332 keV:  $(17.42 \pm 0.34)$  keV compared to **1.88 keV**
- didn't compare linear fit due to different ranges

$$r^2 = 1 - \frac{\sum (y_i - f_i)^2}{\sum (y_i - \bar{y})^2}$$

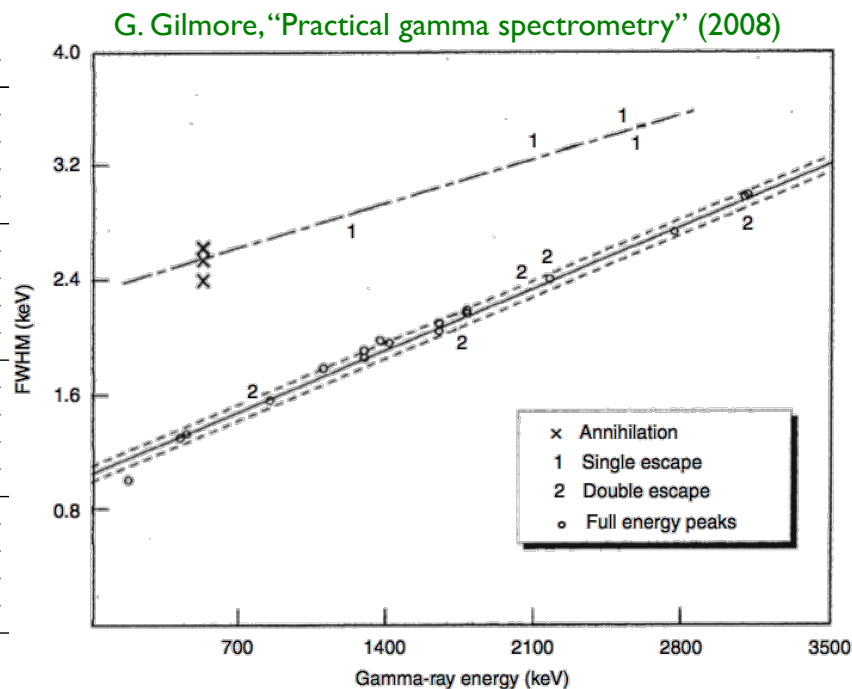
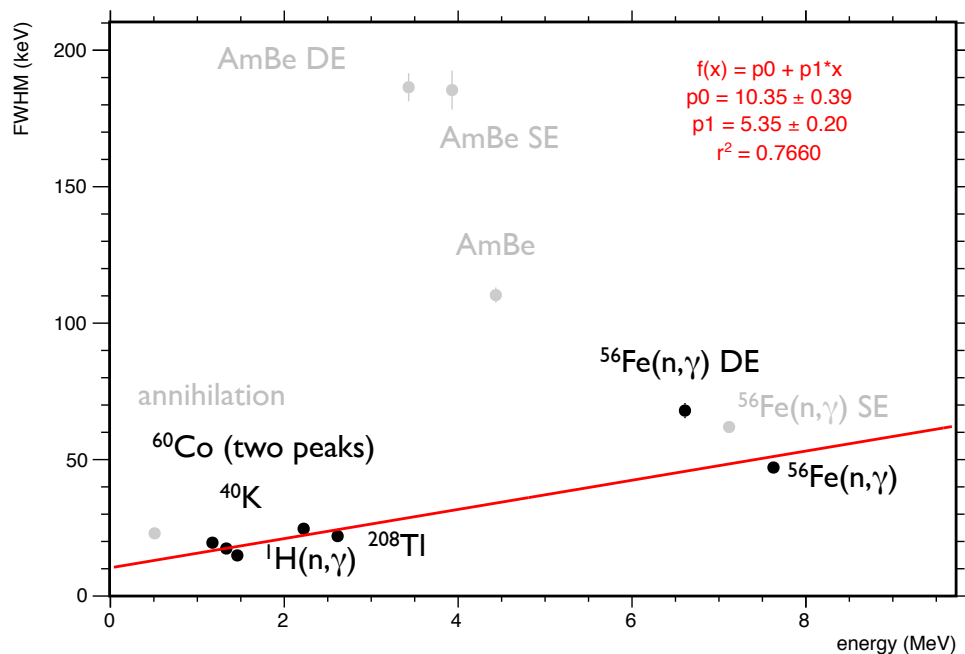


Figure 7.6 FWHM of full energy, single escape, double escape and annihilation peaks as a function of energy, demonstrating the anomalous width of single escape and annihilation peaks (the detector used had a FWHM at 1332.5 keV of 1.88 keV)