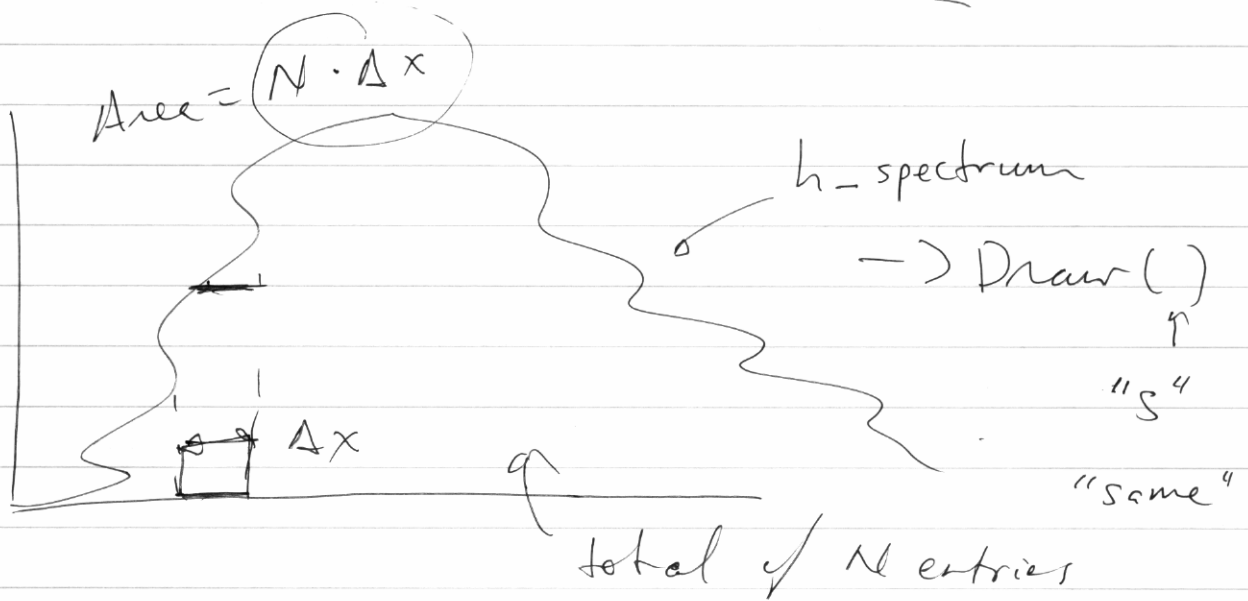
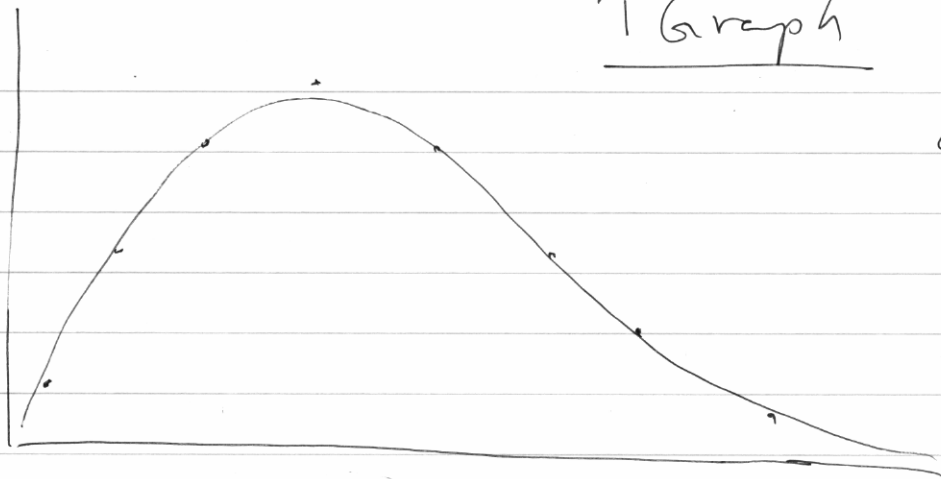


Aide - Memoire 4/2/14

T Graph

to plot  
curve



To compare, scale both to  
unit area.

$$1) \text{ curve. Area} = \int f(x) dx$$
$$= \sum_i f(x_i) \Delta x_i = A$$

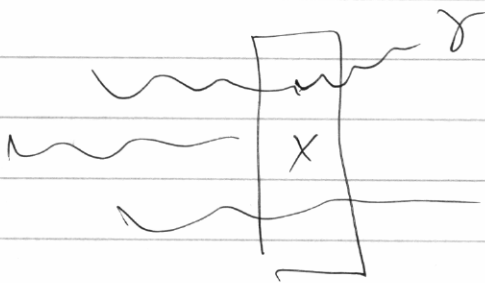
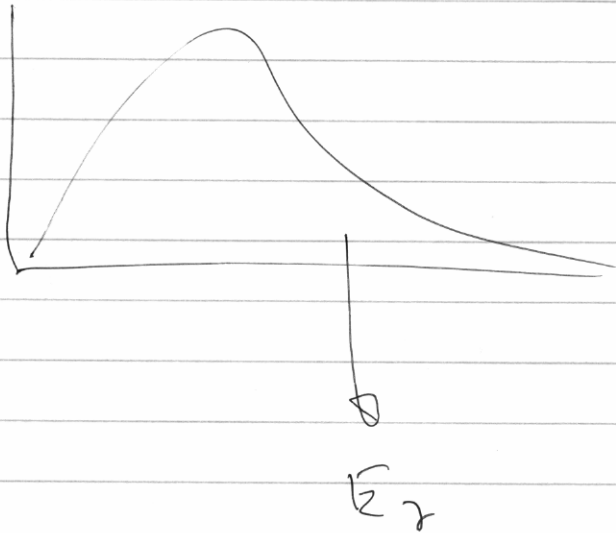
$$\frac{f}{N} \rightarrow \frac{f}{A}$$

2)

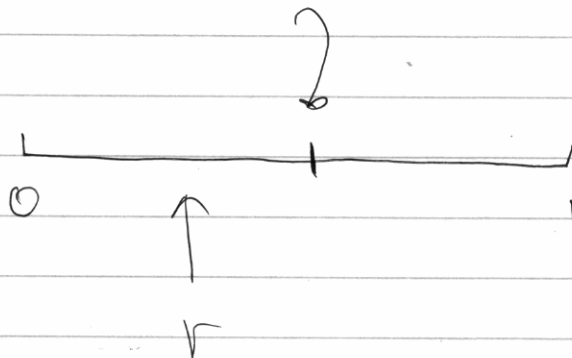
Function from table

Explain algo. + test.

---



$$P(\text{absorb before } x) = 1 - e^{-x/\lambda(E)}$$



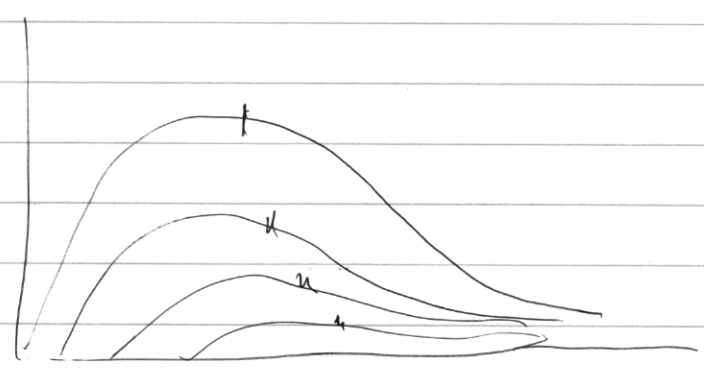
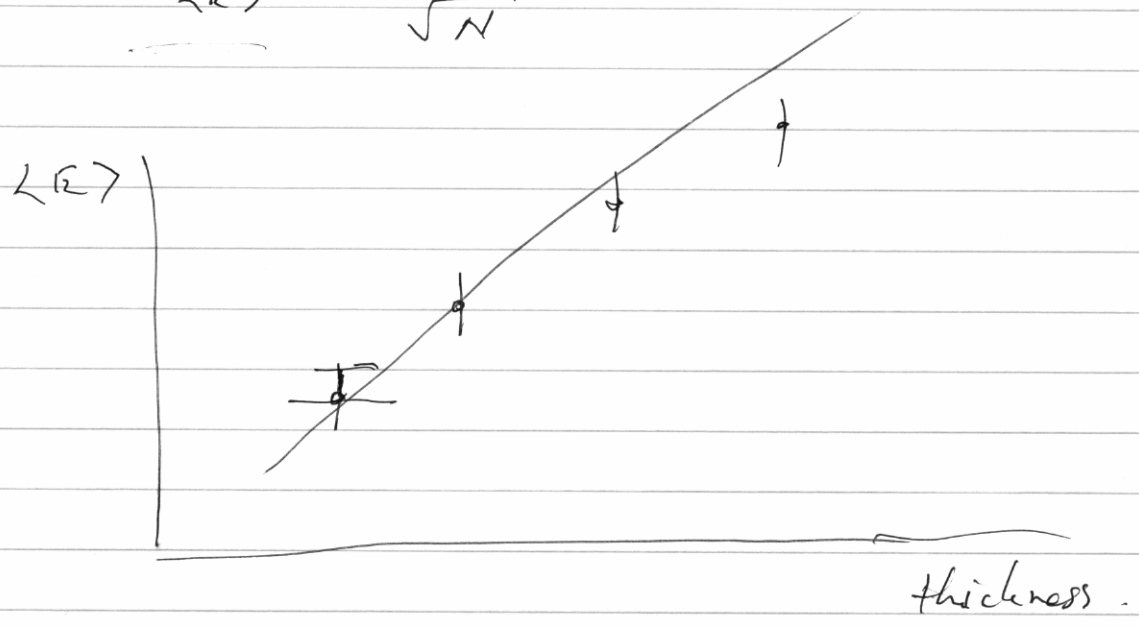
Work out mean  $E$   
after a given absorber.

$$\langle E \rangle = \frac{1}{N} \sum_{i=1}^N E_i$$

$$\sigma_E = \sqrt{\frac{1}{N-1} \sum_{i=1}^N (E_i - \langle E \rangle)^2} \quad \text{RMS}$$

Stat error on  $\langle E \rangle$

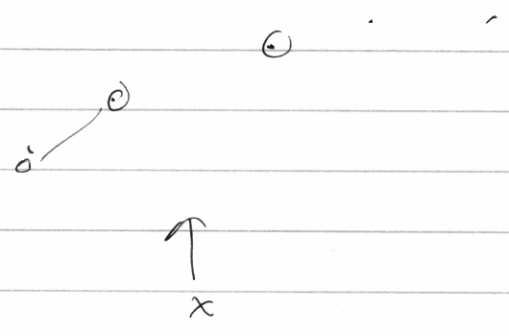
$$\sigma_{\langle E \rangle} = \frac{\sigma_E}{\sqrt{N}}$$



# Extensions

Fancy stuff in Function From Table

~~log~~ log search



spline fit.

## Compton.

Mean free path  $\left( \frac{1}{\lambda} \right) = \frac{1}{\lambda_{ph}} + \frac{1}{\lambda_{comp.}}$