nma Spectroscopy

t3 & Error Calculations (Data)

$= \sqrt{\sigma_c^2\left(\frac{1}{m^2}\right) + \sigma_b^2\left(\frac{1}{m^2}\right) + \sigma_m^2\left(\frac{1}{m^4}\right)}$ $\sigma_m = 2.4$

$\sigma_c \rightarrow$ varies

$\sigma_b = 2.5$

E [MeV]	σ
0.67	0.004
0.018	0.004
0.066	0.004
1.16	0.005

$E = 618.0C + 13.2$

$= \sqrt{\sigma_c^2 + \sigma_b^2 + \sigma_m^2 \frac{1}{m^2}} \frac{1}{m} = \sqrt{\sigma_c^2 (0.0016)^2 + \sigma_b^2 + \sigma_m^2 (0.0016)^2}$ 0.0016

$= \sqrt{\sigma_c^2 + 2.5^2 + 2.4^2 \cdot 2.62 \cdot 10^{-6}}$ 0.0016 $= \sqrt{\sigma_c^2 + 6.250015}$ 0.0016

using $\sigma_c \geq 1$, since channel certainty must not exceed resolution

$E = 621.9$ ± 3 ± 3 $\sigma_E = \sqrt{\sigma_c^2 + 9 + \frac{9}{621^2}}$ 0.002

E [MeV]	σ
0.670	0.005
0.024	0.004
0.072	0.004
1.16	0.01