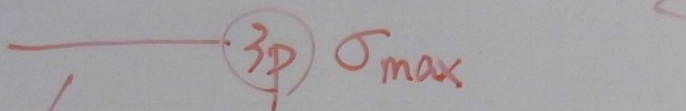


$$A \propto \omega^3$$

1cm

$$n_1 + n_2 \cdot \exp\left(-\frac{v \cdot t}{m_4}\right)$$

A 係數



2s

1s

$$\tau = 10^{-8} \sim 10^{-12} \text{ s}$$

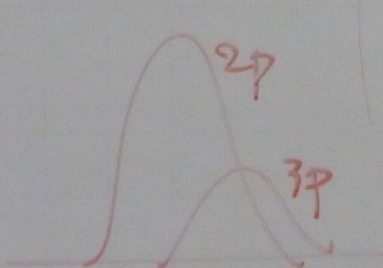
$$v = 10^5 \sim 10^6 \text{ m/s}$$

$\tau \approx \frac{1}{\nu}$

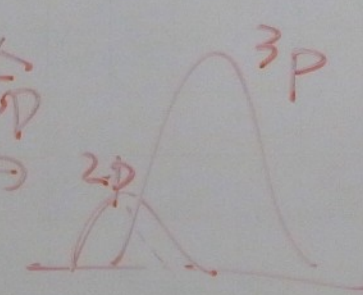
cascade

A_{2p}

$A_{3p} > A_{2p}$



$\frac{1}{\nu} \approx \tau$



3p $\tau \rightarrow l$

1mm (~10mm)