

Chap 6 stuff

$$\left. \begin{array}{l} c = f\lambda \\ E = hf \end{array} \right\} \frac{E}{f} = \frac{hc}{\lambda} \quad J = \frac{\text{kg} \cdot \text{m}^2}{\text{sec}^2}$$

$$E = R_H \left(\frac{1}{n_1^2} - \frac{1}{n_2^2} \right)$$

$$\lambda = \frac{h}{p} = \frac{h}{mv}$$

MO Menting

$$c = 3 \times 10^8 \frac{\text{m}}{\text{sec}}$$

$$\text{(Planck)} \quad h = 6.63 \times 10^{-34} \text{ J} \cdot \text{sec}$$

$$\text{(Rydberg)} \quad R_H = 2.18 \times 10^{-18} \text{ J}$$

1s
 2sp
 3spd
 4spdf

Step out time (man group)

$$\left\{ \begin{array}{l} d = 1 \text{ period late} \\ \text{ex } 3d \rightarrow 4^{\text{th}} \text{ per} \end{array} \right\}$$

$$f = 2 \text{ per. late} \\ 4f \rightarrow 6^{\text{th}} \text{ per}$$

PEL	n	Size	<u>PAULI</u> No 2 e^- can have the same 4 quantum #'s
Sublevel	l	Shape	
Orbital	m	Orientation in space	
Spin	s	→ Which way are we facing?	

Shapes

Spherical

P_x , P_y , P_z

$E = hf$
 $\downarrow \quad \downarrow$

$C = f \lambda$
 $\downarrow \quad \uparrow$

③ $C = f \lambda$
 $3 \times 10^8 = f \quad (6)$
 $f = 5 \times 10^{17} \text{ sec}^{-1}, \text{ Hz}$

Mega: 10^6
 $5 \times 10^6 \text{ MHz}$
 50

