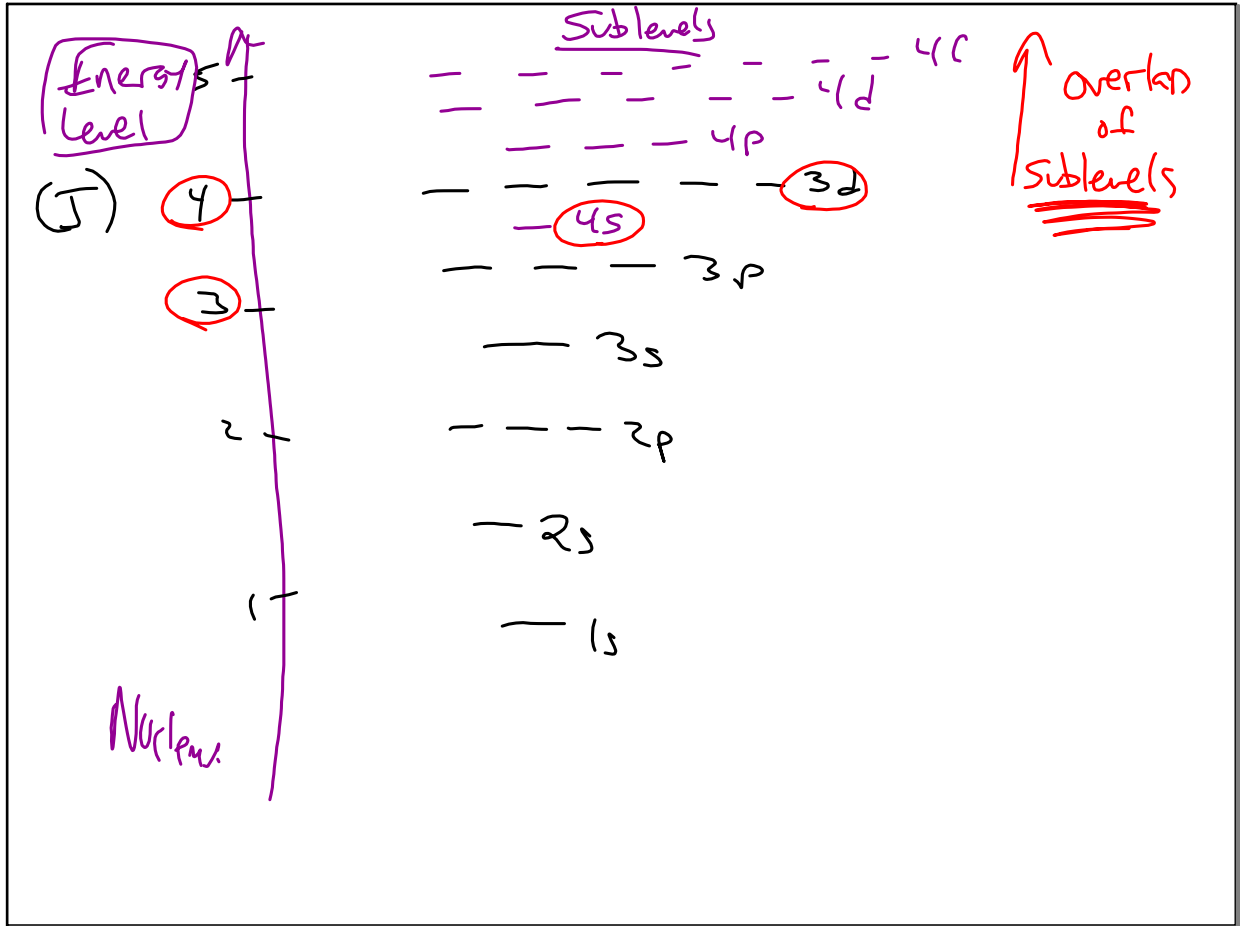


$E = 4.58 \times 10^{-19} \text{ J}$
 $E = hf \quad f = \frac{E}{h} = \frac{4.58 \times 10^{-19}}{6.63 \times 10^{-34}}$
 $c = f\lambda$
 $\lambda = \frac{c}{f} = \frac{3 \times 10^8}{6.9 \times 10^{14}} = 4.34 \times 10^{-7} \text{ m}$

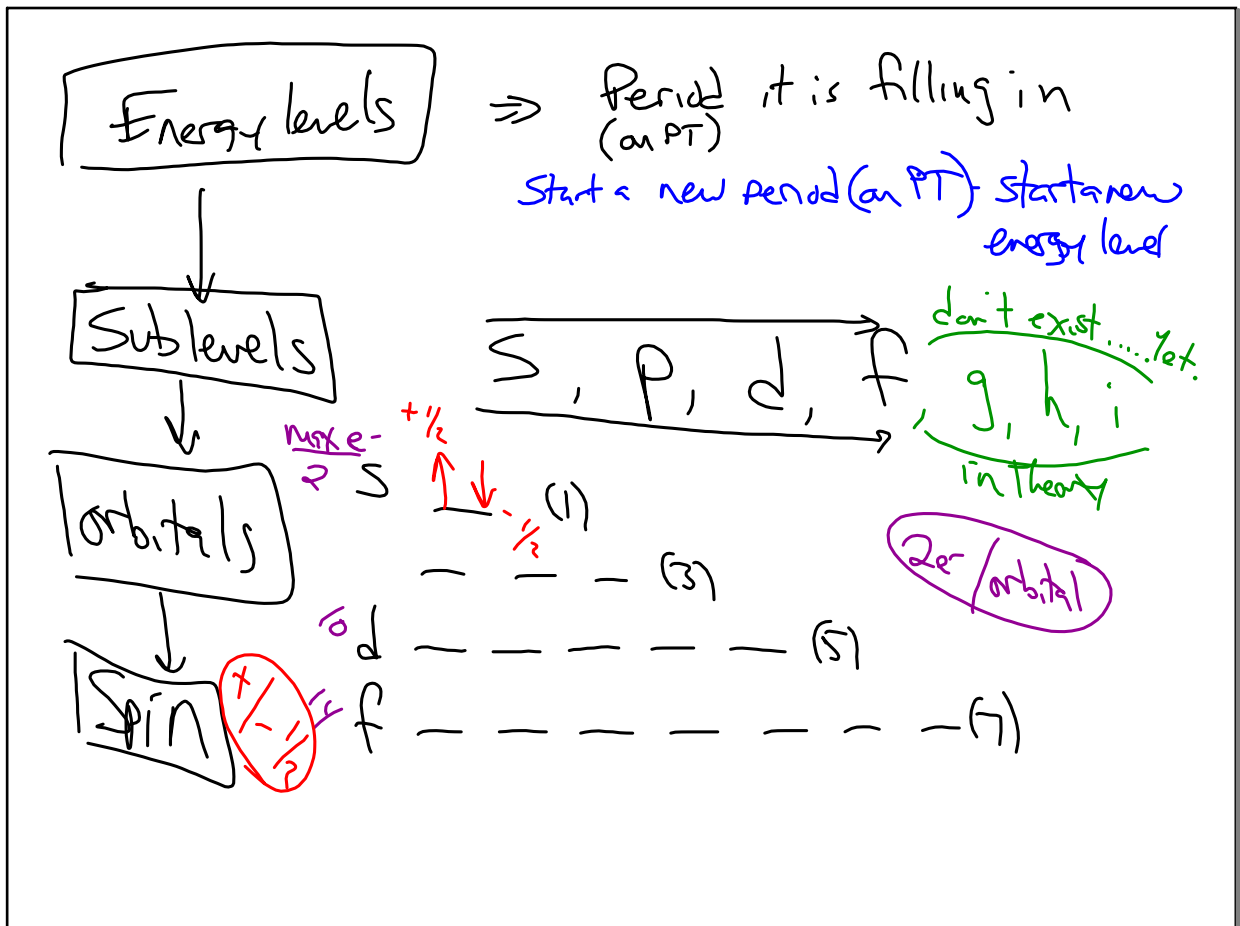
Oct 27-7:37 AM

$9.38 \times 10^6 \frac{\text{m}}{\text{sec}} \leftarrow \text{Find } \lambda \text{ of this e-}$
 $\text{mass} = 9.109 \times 10^{-31} \text{ Kg}$
 $\frac{h}{\lambda} = mv$
 $\lambda = \frac{h}{mv}$
 $\frac{6.63 \times 10^{-34} \text{ J} \cdot \text{sec}}{(9.109 \times 10^{-31} \text{ Kg})(9.38 \times 10^6 \frac{\text{m}}{\text{sec}})}$
 $\frac{7.76 \times 10^{-11} \text{ m}}{10^{-10} \text{ m}} = 0.776 \text{ \AA}$

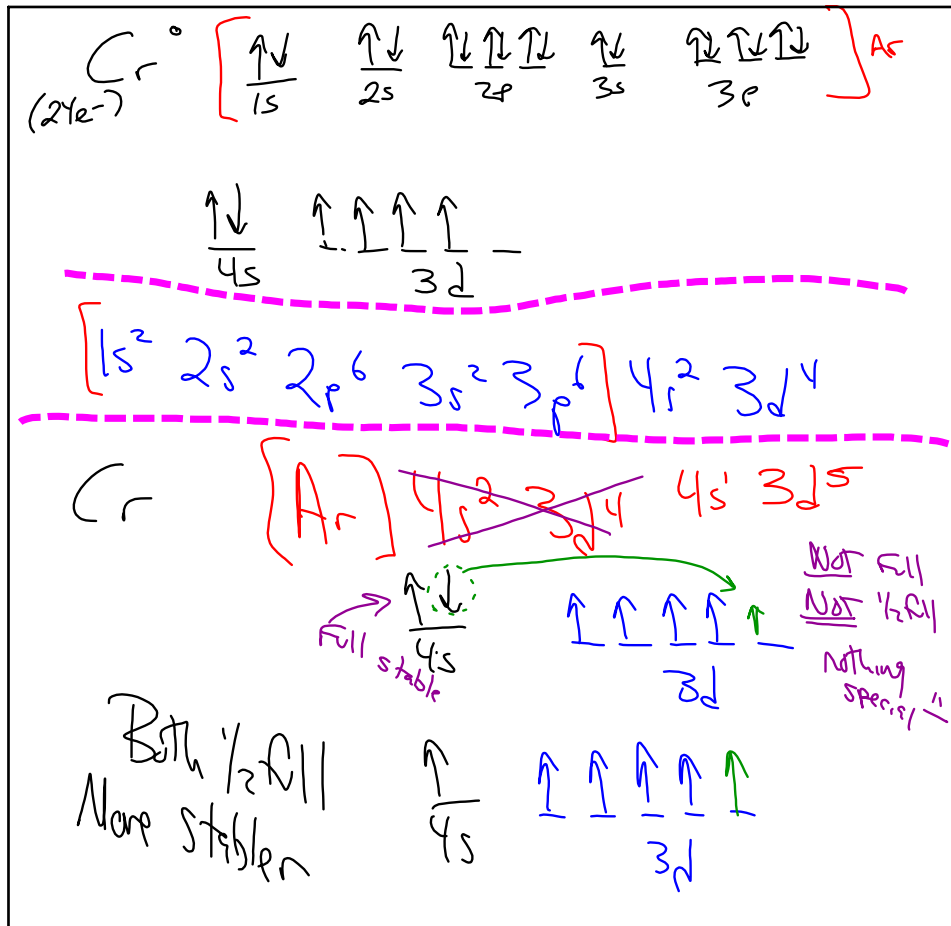
Oct 27-7:59 AM



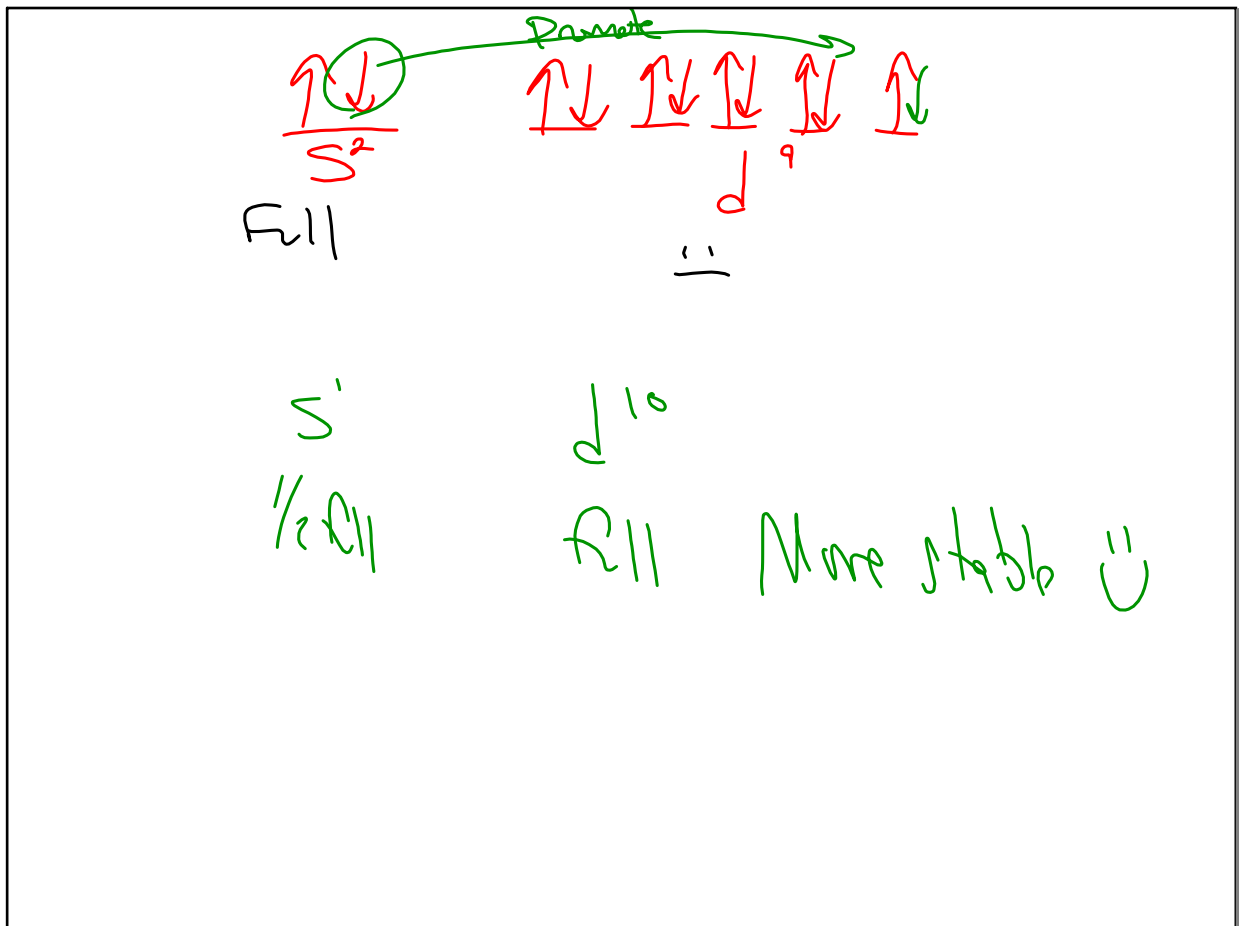
Oct 27-8:08 AM



Oct 27-8:11 AM



Oct 27-8:43 AM



Oct 27-8:53 AM

Jersey shore Pauli exclusion P. rple.

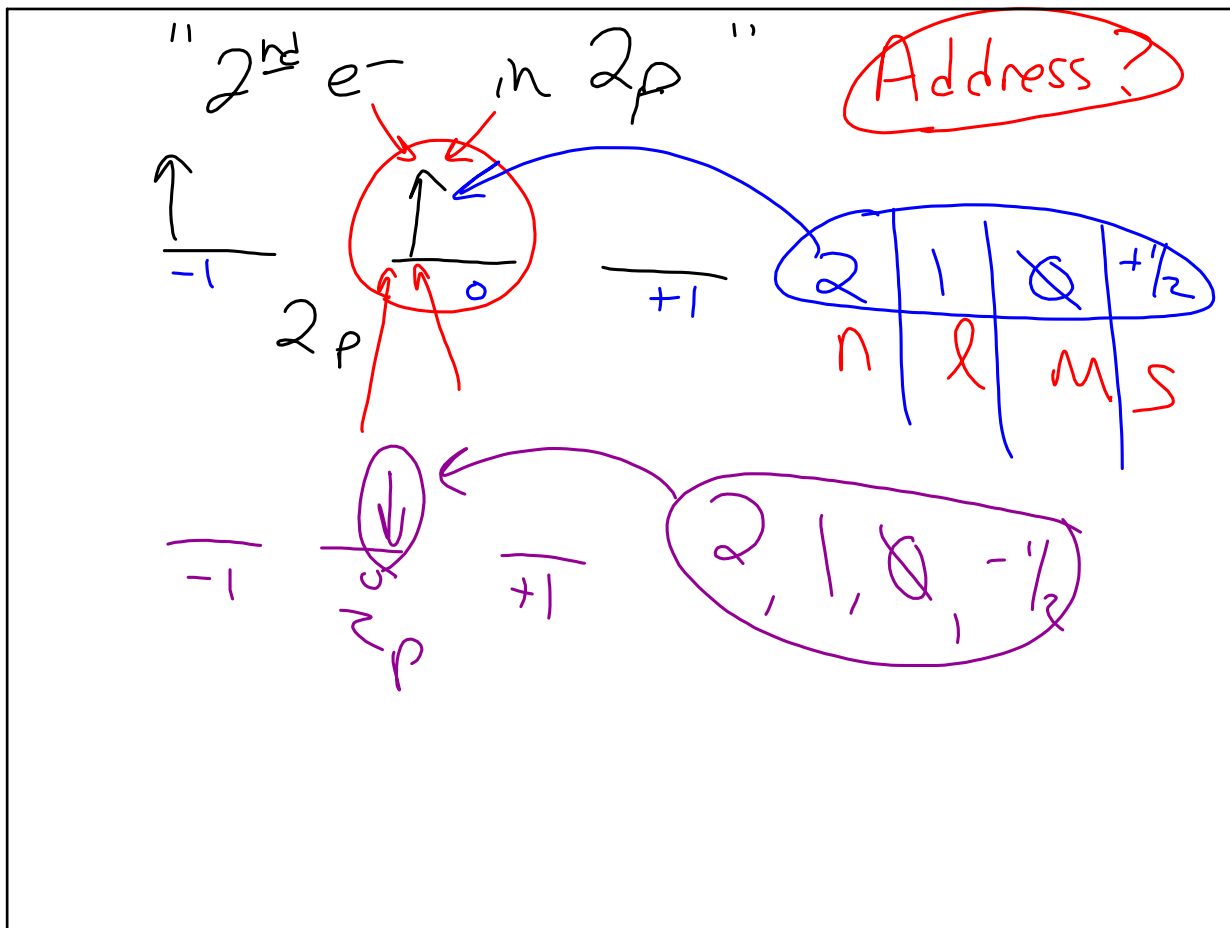
every e⁻ has its own set of
4 quantum #'s (AKA its Address)

$n \rightarrow$ P.F.L.				
$l \rightarrow$ Sublevel azimuthal quantum #	0	1	2	3
$m \rightarrow$ orbital magnetic quantum #	$m = -l \text{ to } +l$			
$s \rightarrow$ Spin	$\uparrow +\frac{1}{2}, \downarrow -\frac{1}{2}$			

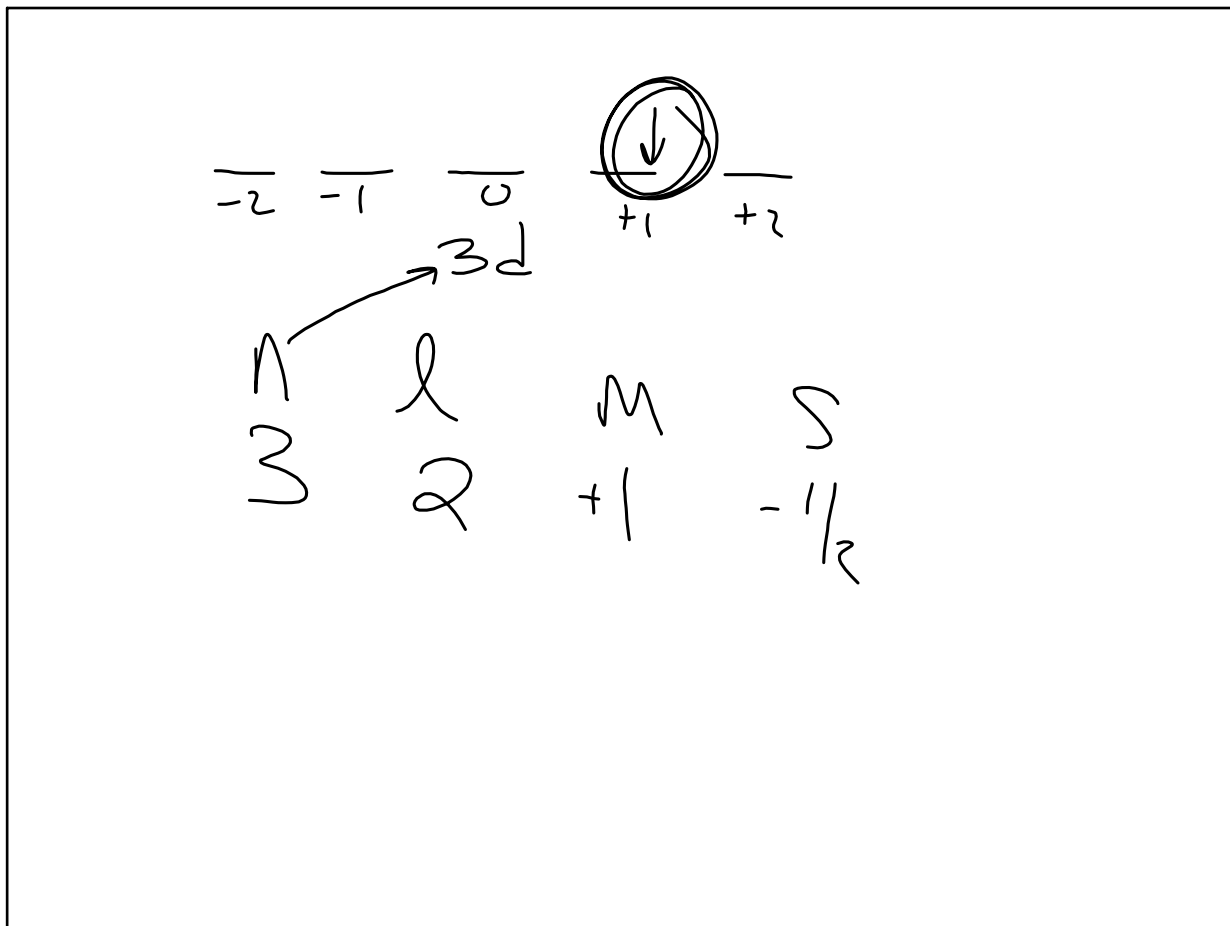
Oct 27-8:54 AM

s	$\overline{0}$					
p	$\overline{-1}$	$\overline{0}$	$\overline{+1}$			
d	$\overline{-2}$	$\overline{-1}$	$\overline{0}$	$\overline{+1}$	$\overline{+2}$	
f	$\overline{-3}$	$\overline{-2}$	$\overline{-1}$	$\overline{0}$	$\overline{1}$	$\overline{2}$

Oct 27-8:59 AM



Oct 27-9:01 AM



Oct 27-9:04 AM

Where is "1s"

Nucleus

(+2) He)
1s

(+10) Ne)
1s

(+18) Ar)
1s

2s 2p
3s 3p 3d

Valence

CORE provides shielding to valence
allows valence to go further out.
(away from Nucleus)

Draw exaggerated!

Oct 27-9:06 AM

↑ ↑
—
1s

↑ — ↑
—
2p

Oct 27-9:15 AM