

Stable

① Full PEL (Period)
Principle Energy Level

② 8 valence e-
Stable octet

PEL → 4
Sublevel

Oct 22-7:40 AM

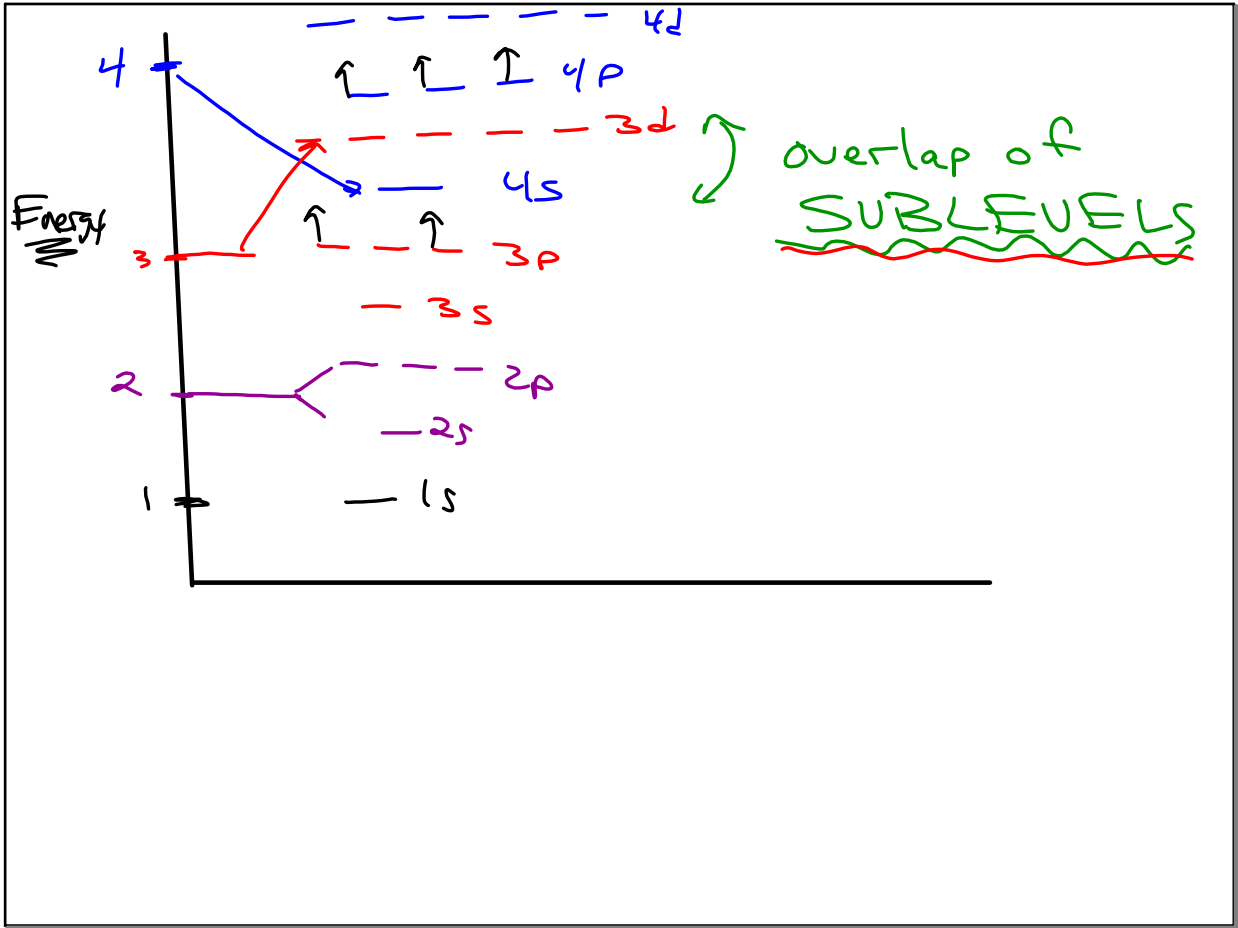
S + P ⇒ Main group elements.
"Fill on Time"

d ⇒ "one period late"

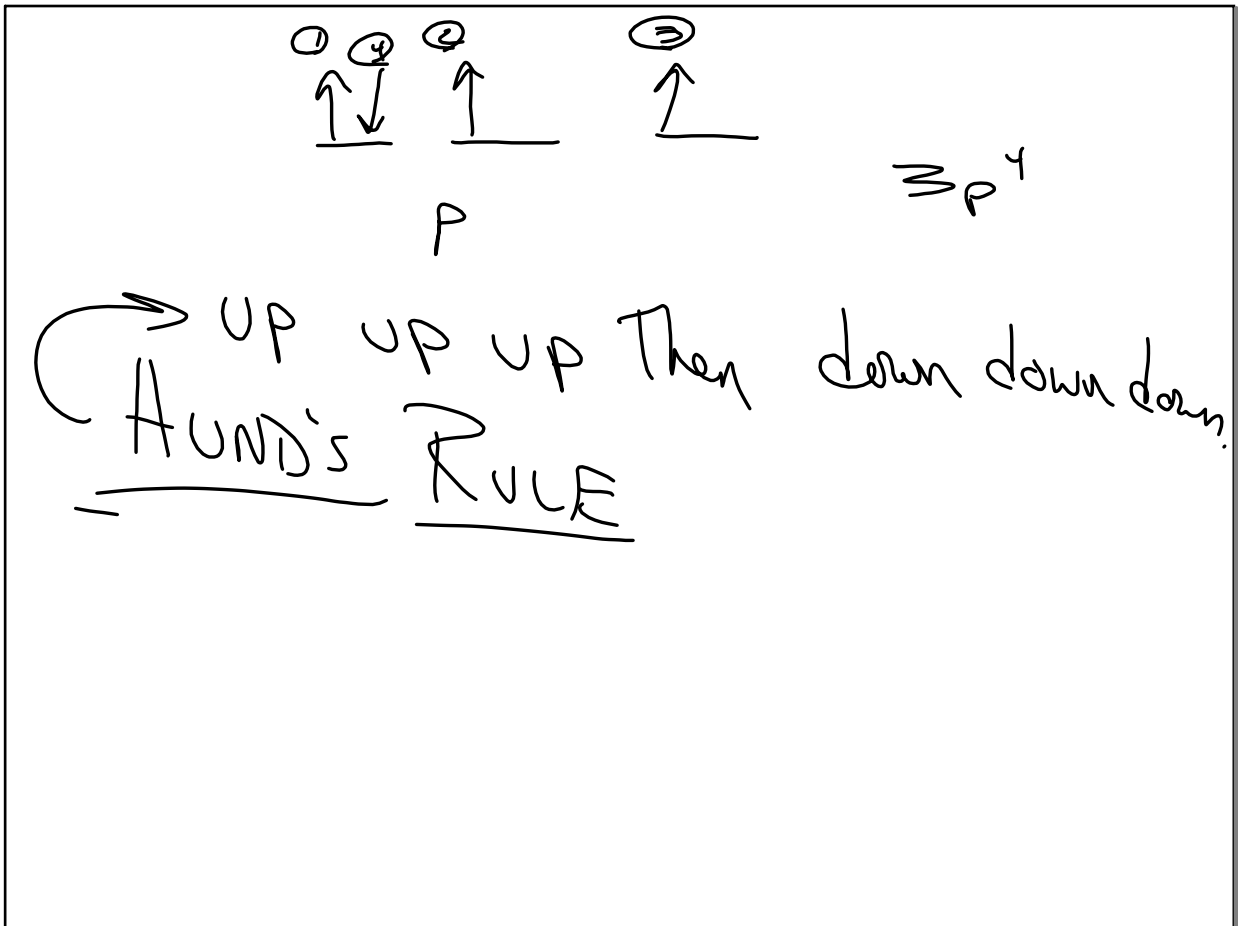
f ⇒ "two periods late"

1s
2s + 2p
3s, 3p, 3d
4s, 4p, 4d, 4f
5s, 5p, 5d, 5f, 5g
6s, 6p, 6d, 6f, 6g, 6h

Oct 22-8:22 AM



Oct 22-8:28 AM



Oct 22-8:34 AM

Quantum #s → PEL

l azimuthal → Sublevel → l value

Sublevel	s	p	d	f
l value	0	1	2	3

M magnetic → Where $-l$ to $+l$ in that sublevel

S spin → $+\frac{1}{2}$ (↑) $-\frac{1}{2}$ (↓)

Examples of M values:

- s: -1 0 $+1$ p
- d: -2 -1 0 $+1$ $+2$ d

No 2e- can have same 4 quantum #'s

Oct 22-8:38 AM

3p orbitals: $3p_{-1}$ (↑ ↓), $3p_0$ (↑), $3p_{+1}$ (↑)

3p

$n = 3$

$l = 1$

$M = -1$

$S = -\frac{1}{2}$

Quantum numbers for $3p_{+1}$:

$n = 3$, $l = 1$, $m = +1$, $s = +\frac{1}{2}$

Oct 22-8:42 AM

$$6 / 64 + 70$$

Oct 22-8:47 AM