Bohr Diagram Notes

A. Bohr Diagram (Planetary Model)

1. Determine # of e- and draw nucleus with #P and #N
2. Determine # of energy levels (n) – Rings/Shells
   - Use periodic table- Row # = # of shells
3. Add electrons according to…

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n= 1 → holds up to __2__ electrons

n= 2 → __8__

n= 3 → __8__ or __18__

outer shell can only hold 8 e^-

Only elements with more than 30 electrons can have 18 electrons in their 3rd shell

A. Bohr Diagram

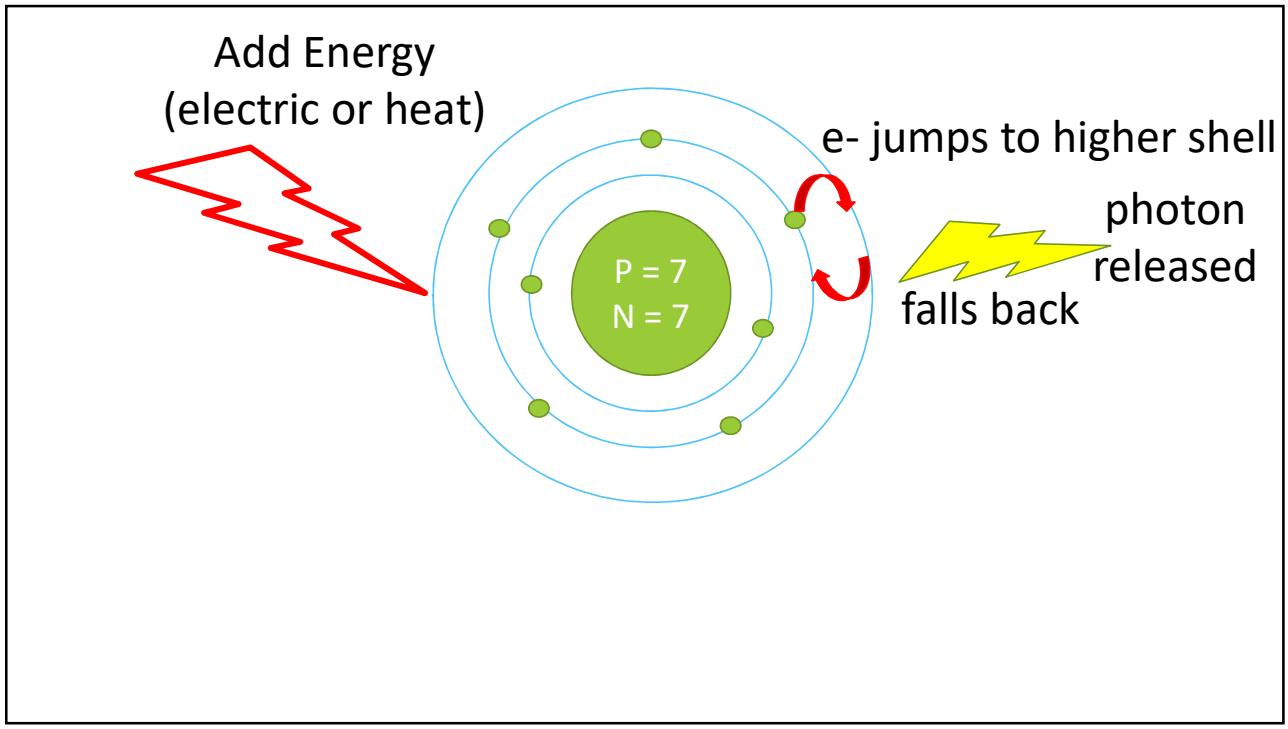
3. The higher the energy level (n), the more energy the electrons in it have
4. An atom is "full" if its outermost shell has 8 electrons (2 if it is He)

A. Bohr Diagram

5. Ex: Determine the # of e^- for each shell in…
   a) Nitrogen 2^{nd} Row = 2 shells Full? No
      7 e- 2 - 5
   b) Strontium 5^{th} Row = 5 shells Full? No
      38 e- 2 - 8 - 18 - 10 - 2

B. Ground State Vs. Excited State

1. Ground State = Lowest energy state for e- (normal)
2. Excited State = e- not at lowest possible energy levels


Add Energy
(electric or heat)
e- jumps to higher shell
photon
released
falls back
P = 7
N = 7