

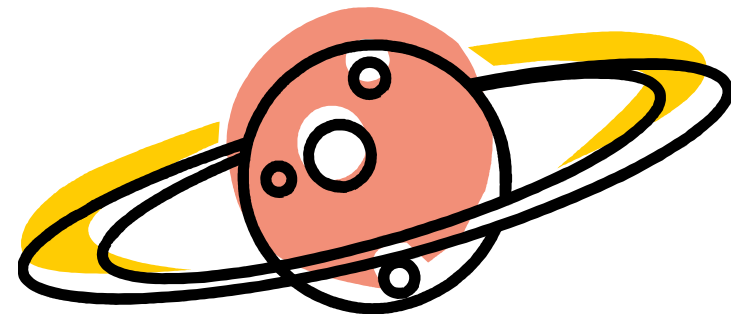
ORBITALS – WHERE THE ELECTRONS LIVE

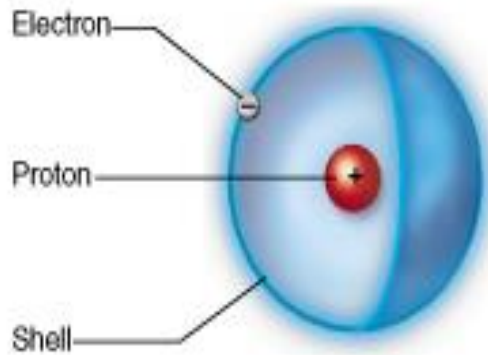


Niels Bohr

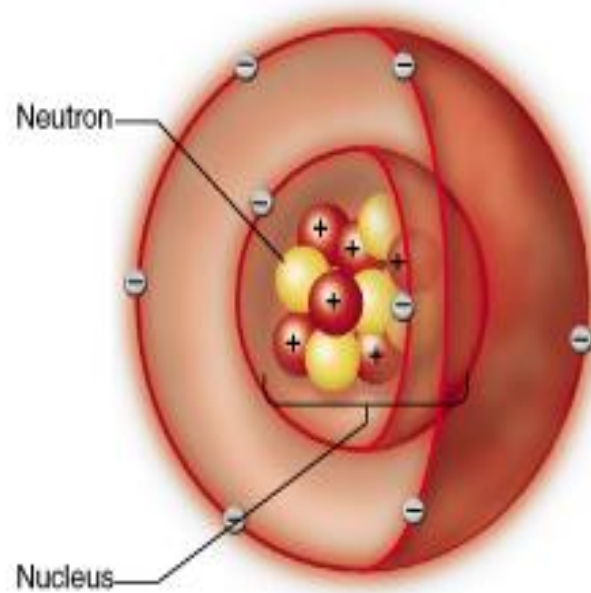
Electrons orbit nucleus

- When: 1913
- Where: England
- What: **Electrons “orbit” the nucleus** in “rings”
- Why: Bohr was trying to show why the negative electrons were not sucked into the nucleus of the atom.

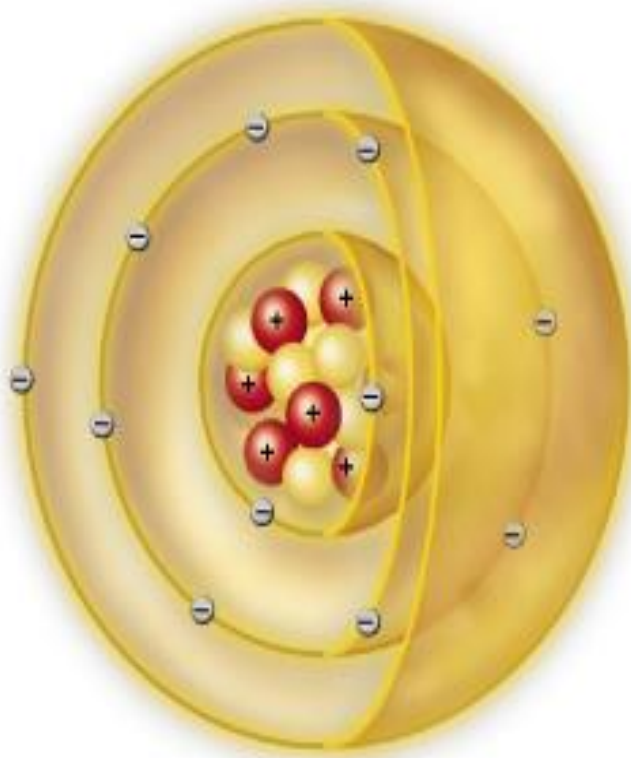




(a) Hydrogen
1 proton



(b) Oxygen
8 protons
8 neutrons
8 electrons
in 2 shells



(c) Sodium
11 protons
11 neutrons
11 electrons
in 3 shells

Electron Cloud Model

- Electrons travel around the nucleus in **random** orbits.
- **Cannot predict exactly where** they will be at any given moment.
 - Can predict the **MOST LIKELY** place
 - **Orbitals – probability clouds**

