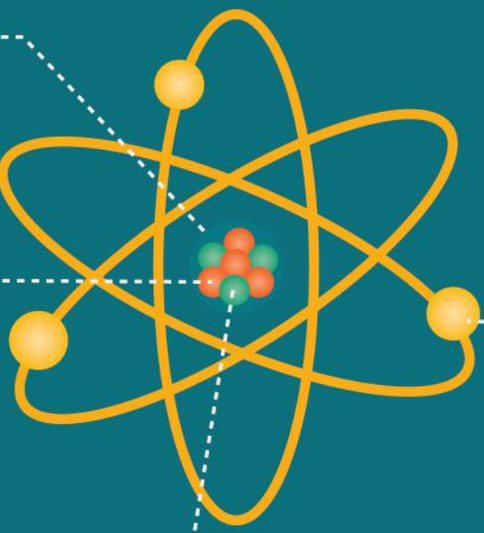
STRUCTURE OF ATOM

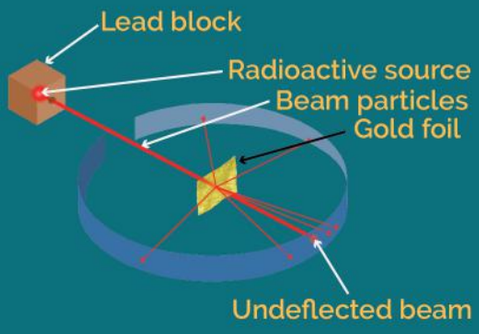
Atomic Nucleus
Centre of an atom constituting positively charged particles "protons" and uncharged particles "neutrons"

Extra nucleus
larger region which is composed of a cloud of negatively charged particles called an electron

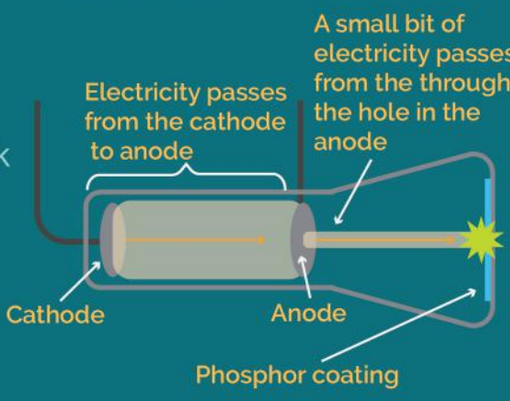
Protons
Discovered by Rutherford
Contributes positive charge of the atom

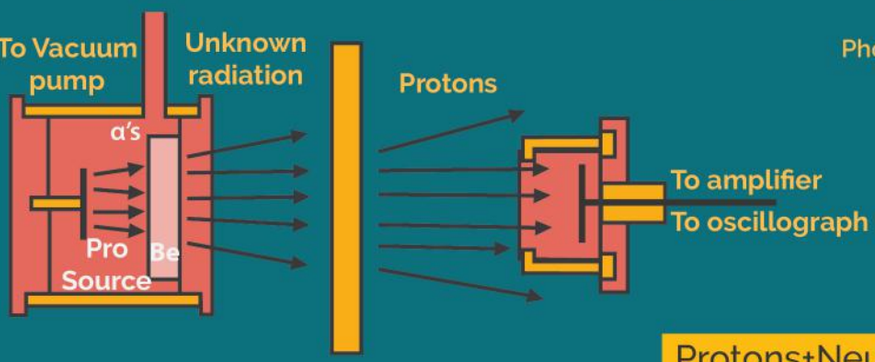


Electrons
Discovered by J.J.Thomson
Revolve around centre of nucleus



Neutrons
Discovered by James Chadwick by using scattered particle to calculate mass of the neutral particle



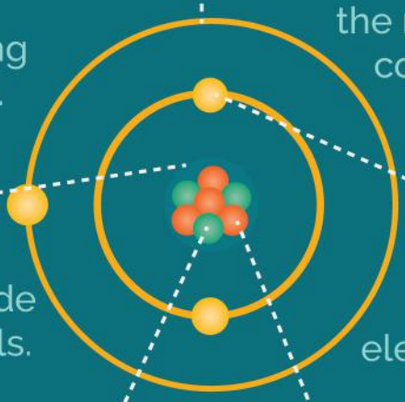


Protons+Neutrons= Nucleons

Orbit

The central nucleus consists of protons and neutrons. Containing almost all the mass of the atom.

the nucleus of an atom is very small compared to the size of the atom.



Nucleus

Electron

the elelctrons are orbiting outside the nucleus in the electron shells.

the elelctrons are moving in electron shells at very high speed.

Neutron

Proton

Comparison of Subatomic Particles

Particles	Location	Charge(C)	Mass(g)	Mass(amu)
Proton	Inside nucleus	$1.6\,02 \times 10^{-19}$	$1.6\,7 \times 10^{-24}$	1.00073=1
Neutron	Inside nucleus	0	$1.6\,8 \times 10^{-24}$	1.00087=1
Electron	Outside nucleus	$-1.6\,02 \times 10^{-19}$	9.11×10^{-24}	0.0006=0