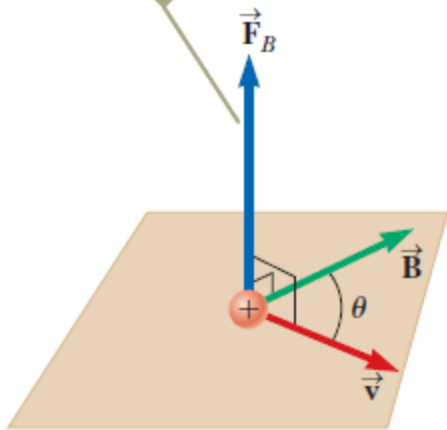


Curs X

Miscarea particulelor incarcate in
camp magnetic. Legea lui Ampere.
Inductia electromagnetica

The magnetic force is perpendicular to both \vec{v} and \vec{B} .

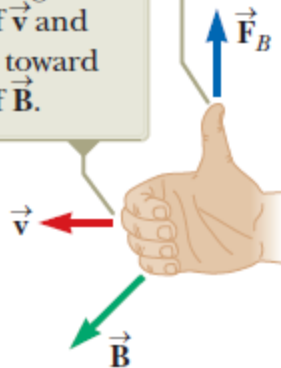


a

$$\vec{F}_B = q\vec{v} \times \vec{B}$$

(2) Your upright thumb shows the direction of the magnetic force on a positive particle.

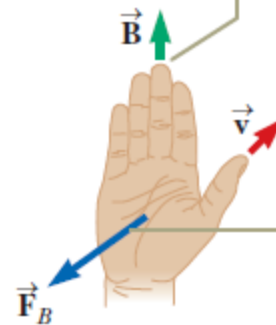
(1) Point your fingers in the direction of \vec{v} and then curl them toward the direction of \vec{B} .



a

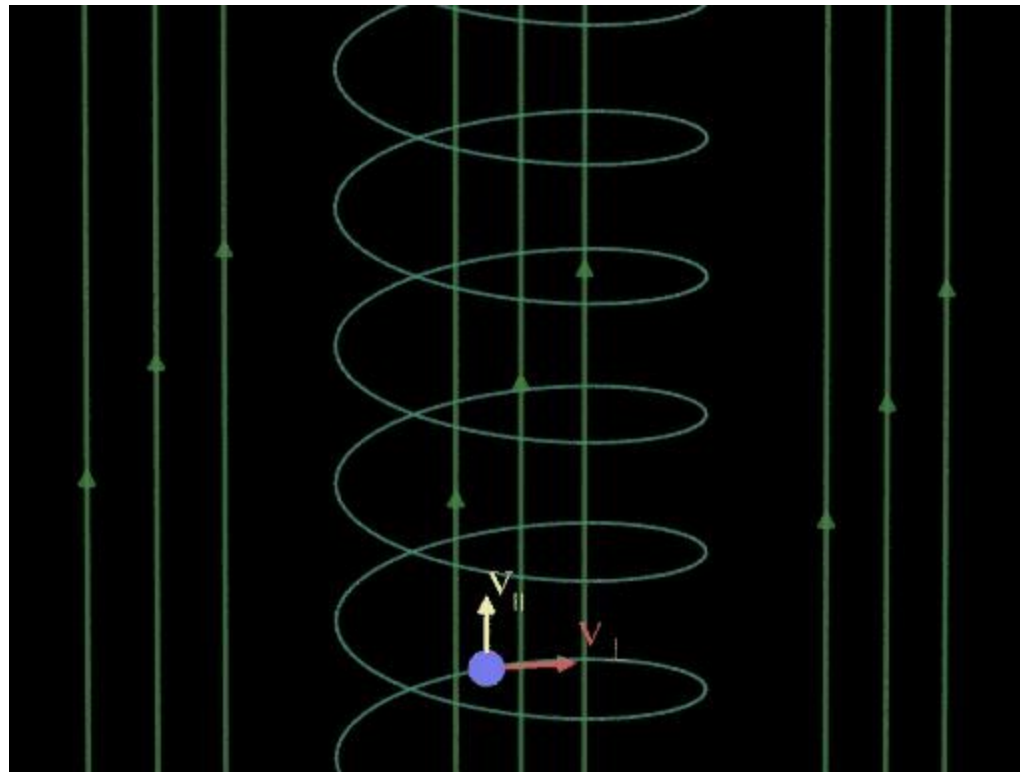
(1) Point your fingers in the direction of \vec{B} , with \vec{v} coming out of your thumb.

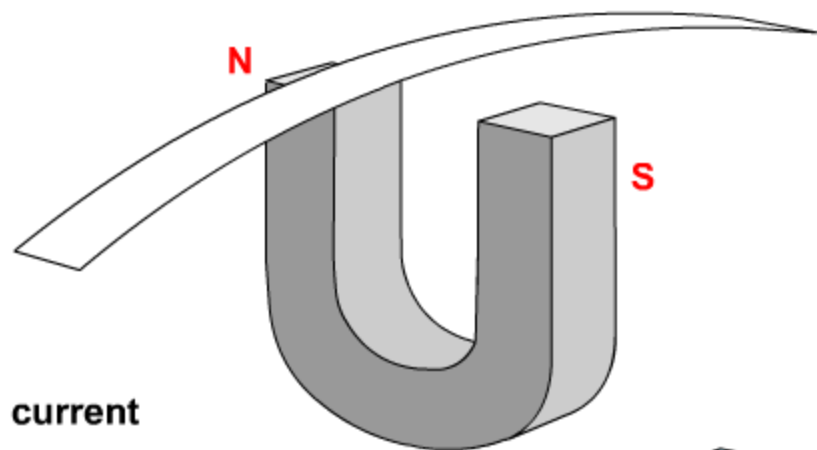
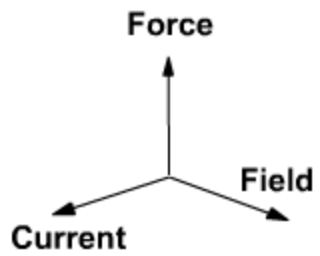
(2) The magnetic force on a positive particle is in the direction you would push with your palm.



b

Mișcarea unei sarcini în câmp magnetic uniform



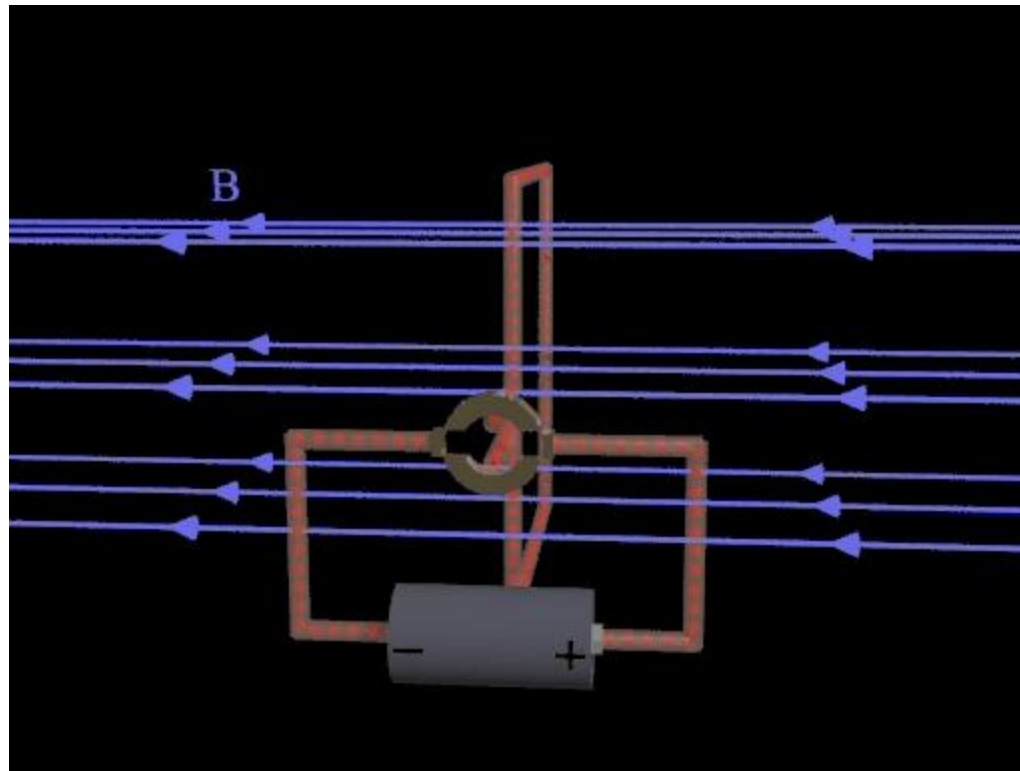


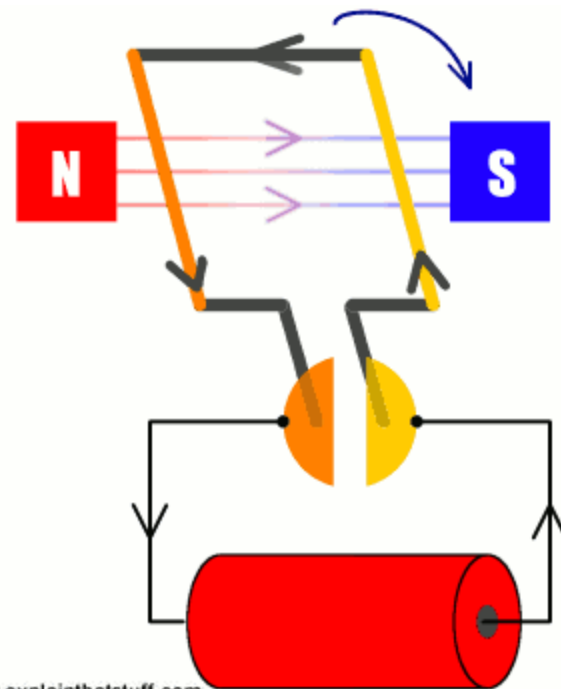
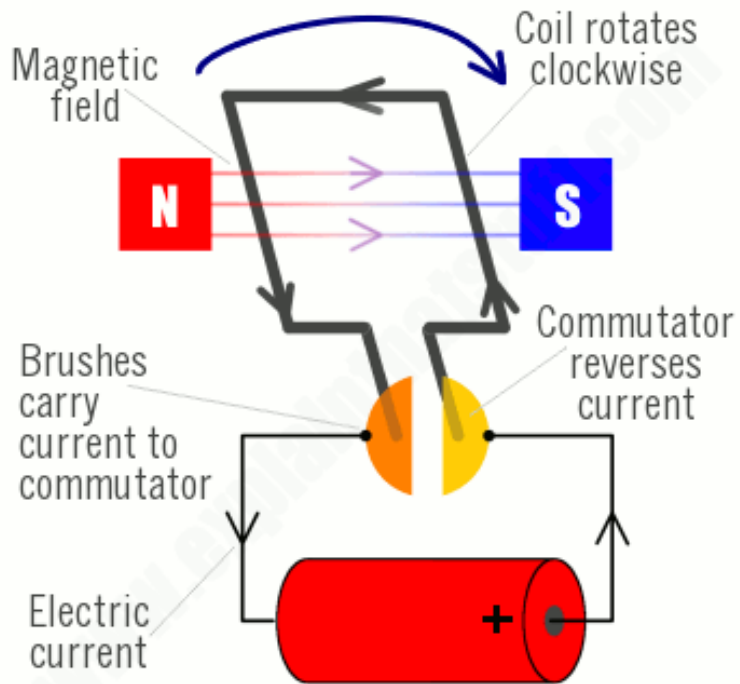
← Apply/change current

→ Switch off current

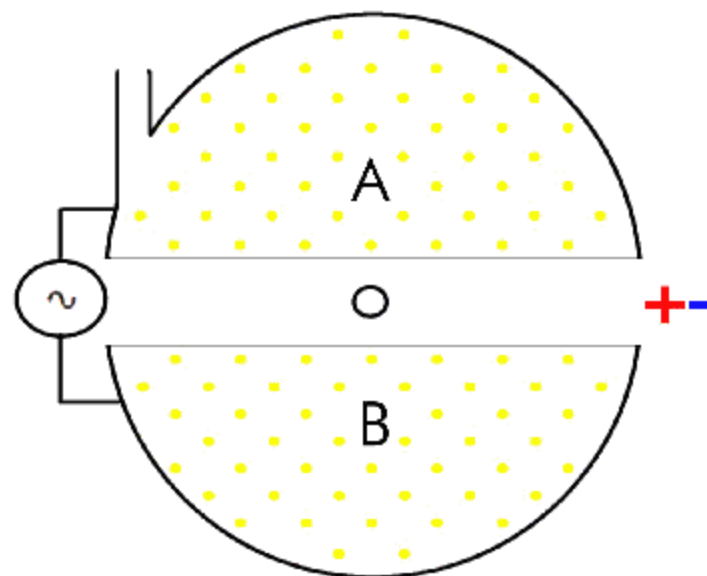
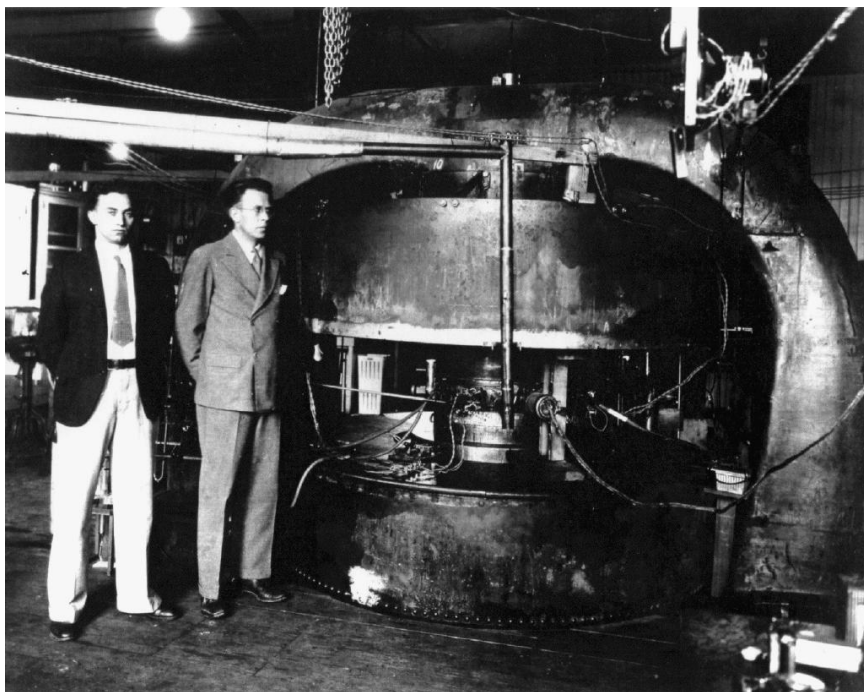


Forța exercitată asupra unui conductor parcurs de curent electric în câmp magnetic - electromotorul

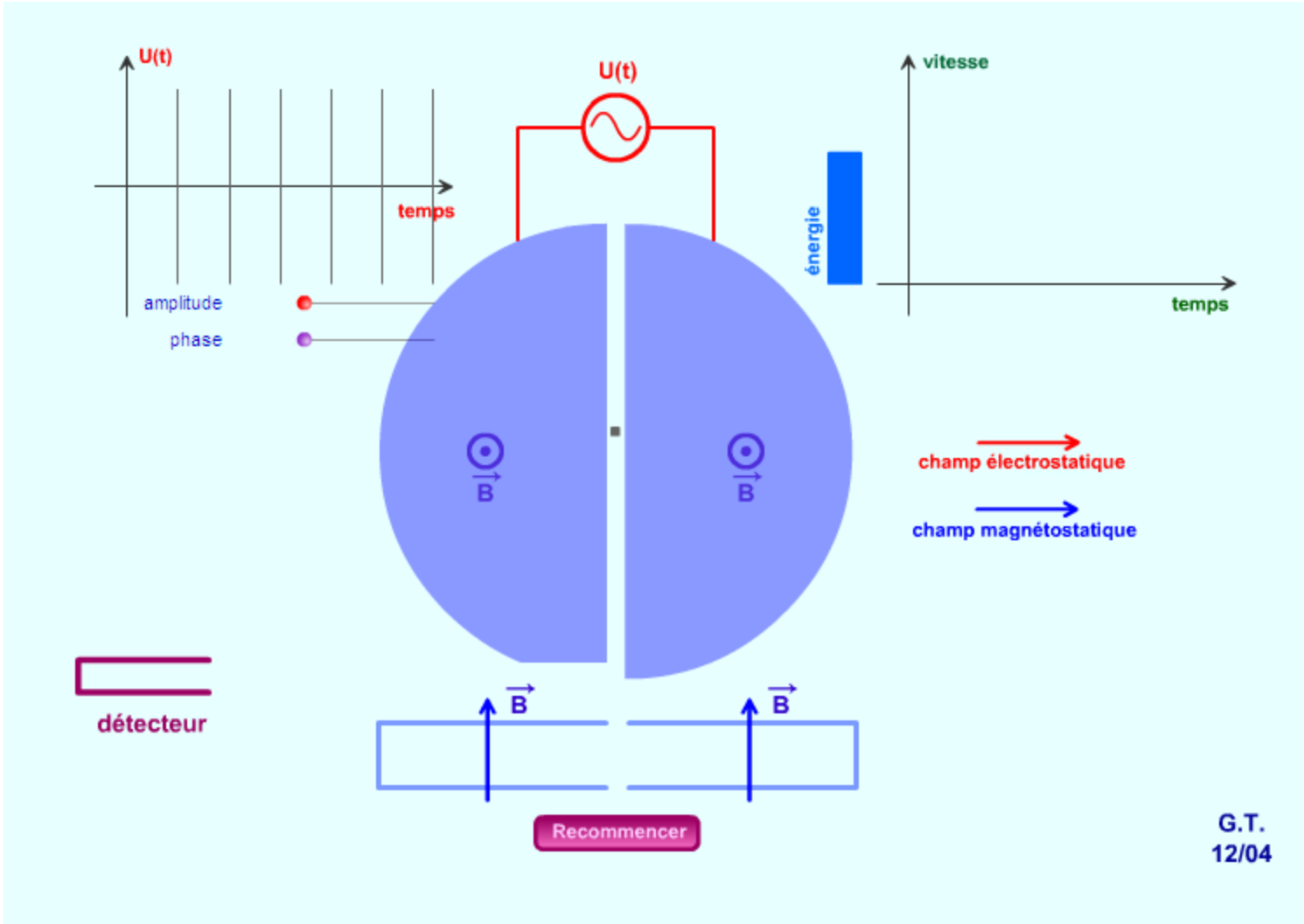




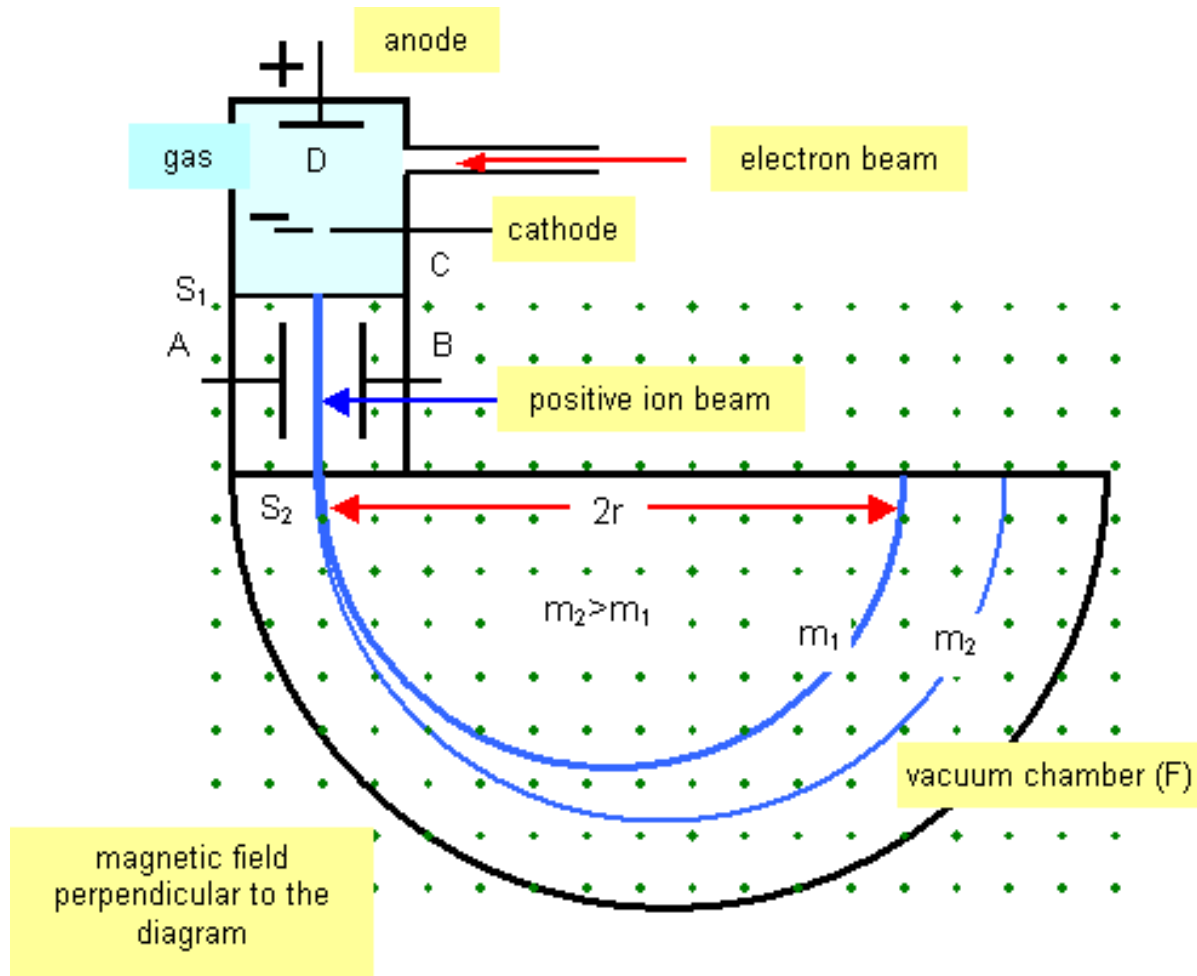
Ciclotronul – E. O. Lawrence (1901-1958)



Cyclotronul

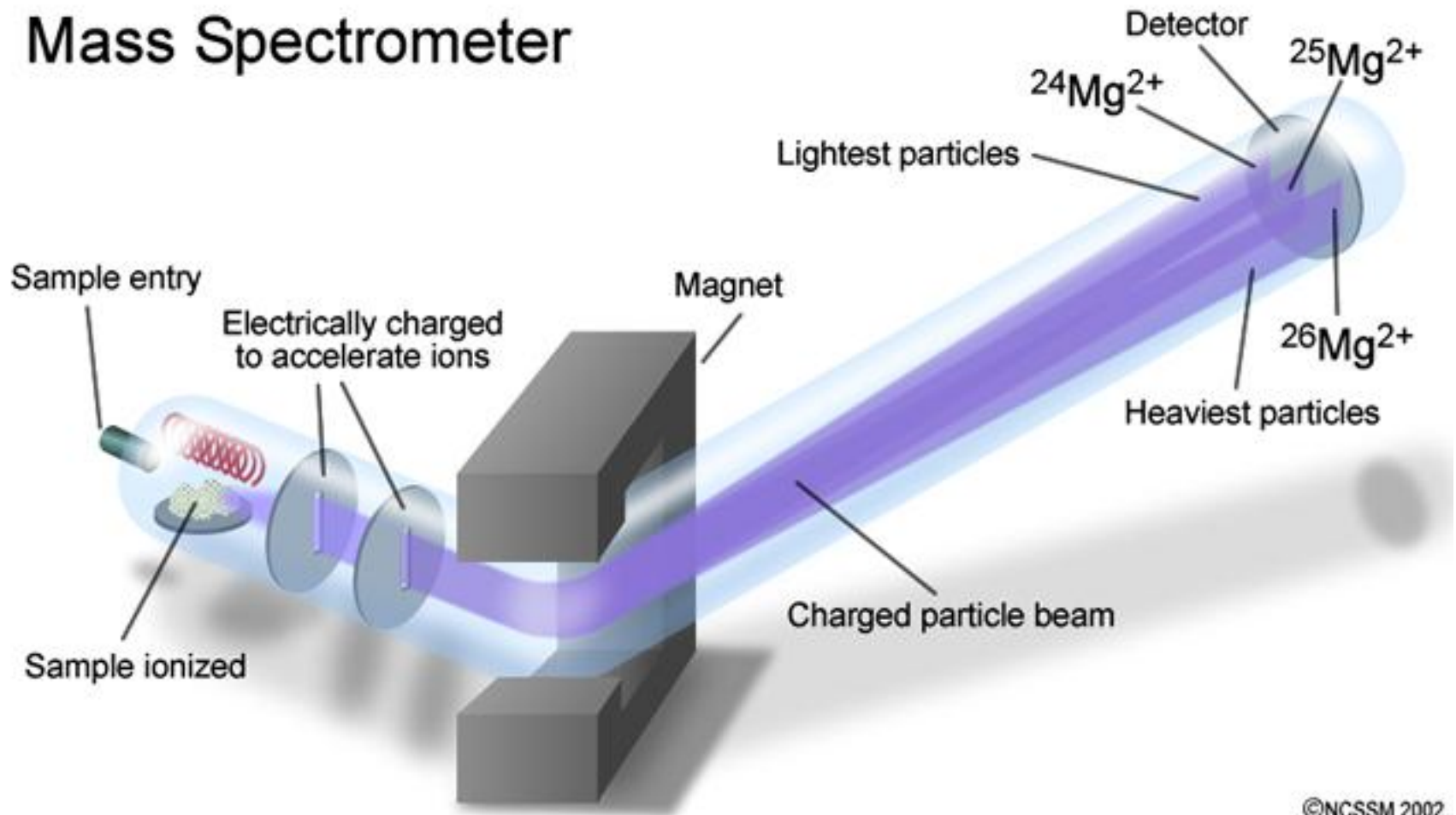


Spectrometrul de masă



Spectrometrul de masă

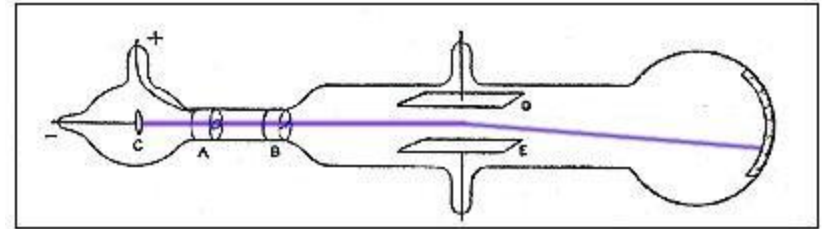
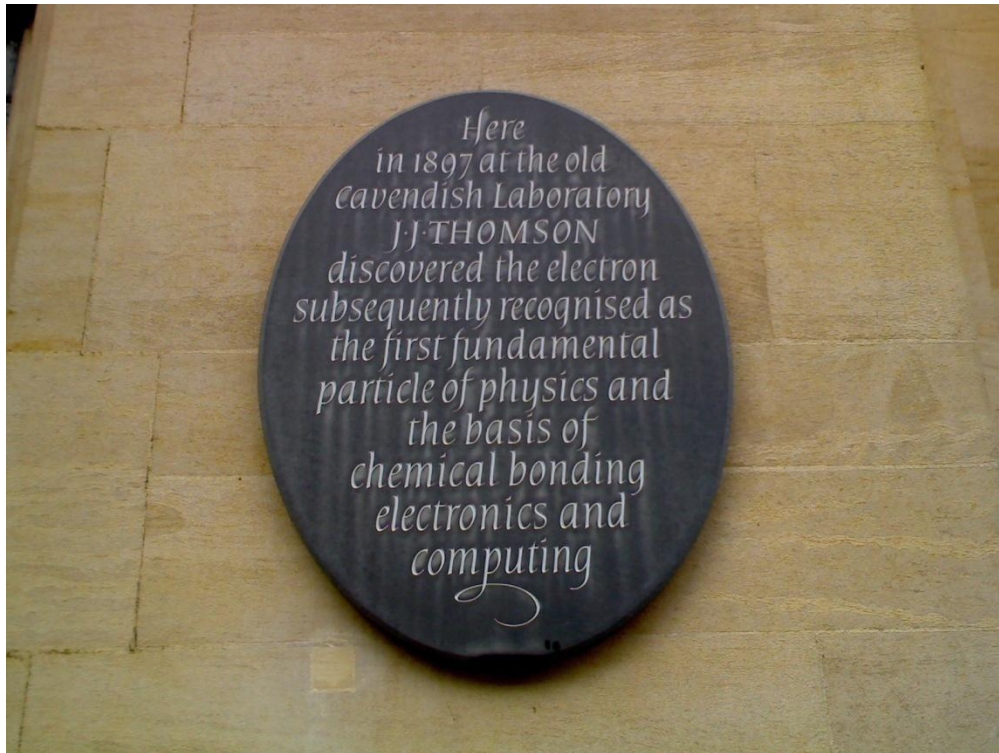
Mass Spectrometer



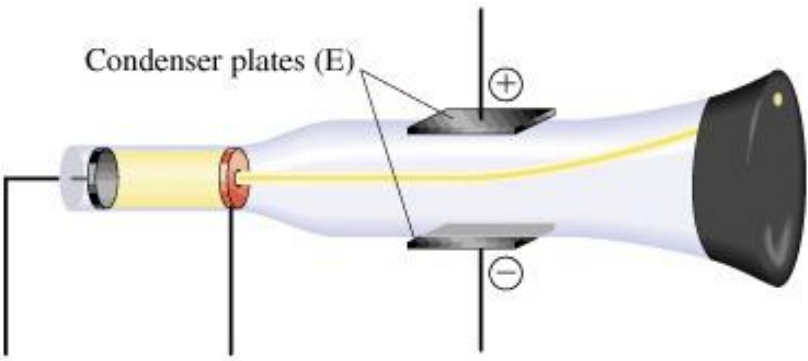


J. J. Thomson (1856-1940)

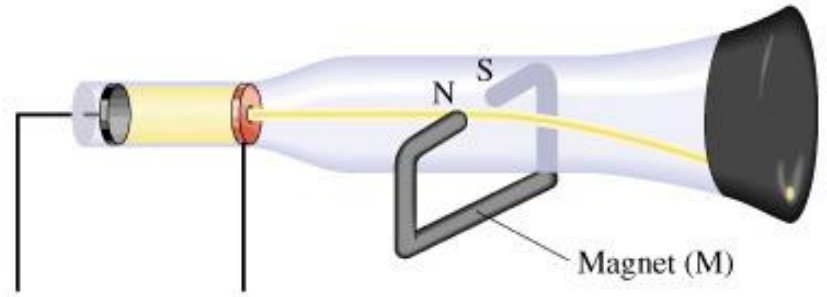
- descoperirea electronului



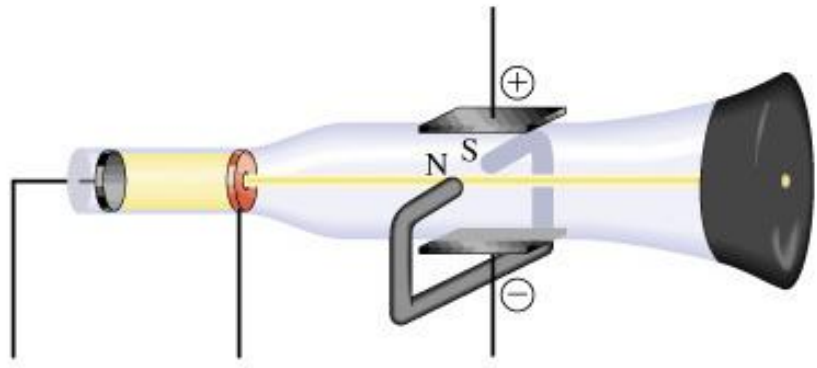
Experimentul lui J.J. Thomson – descoperirea electronului



(a)



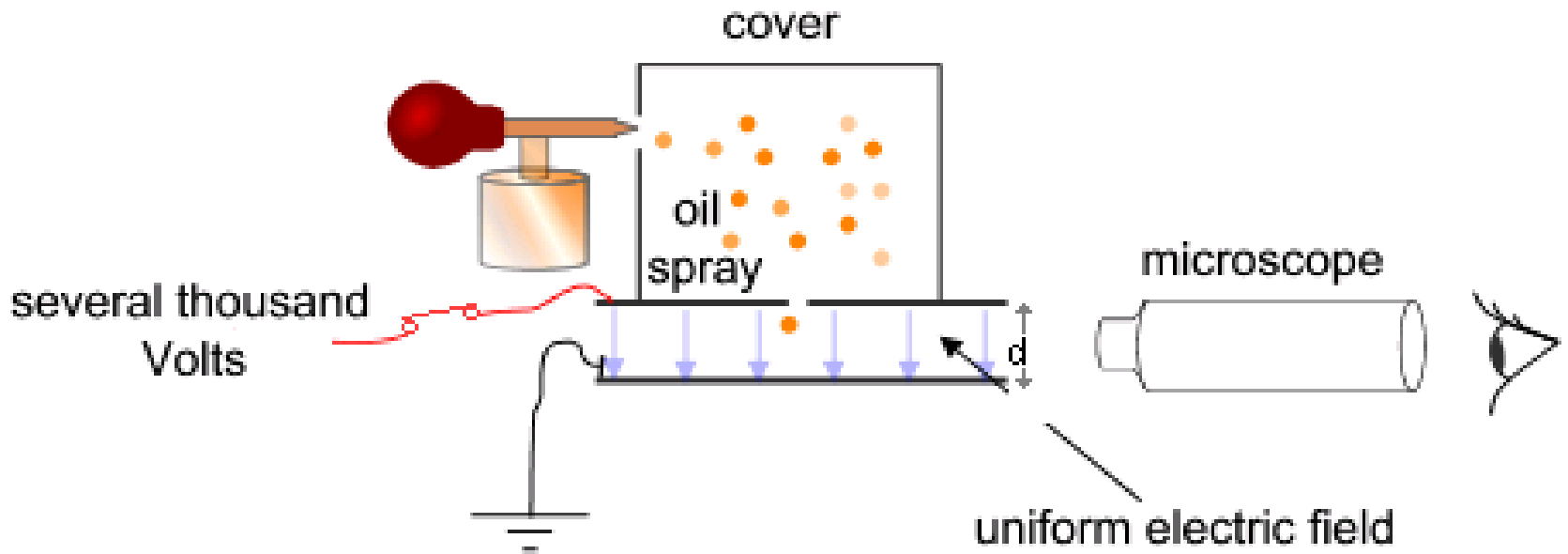
(b)



(c)

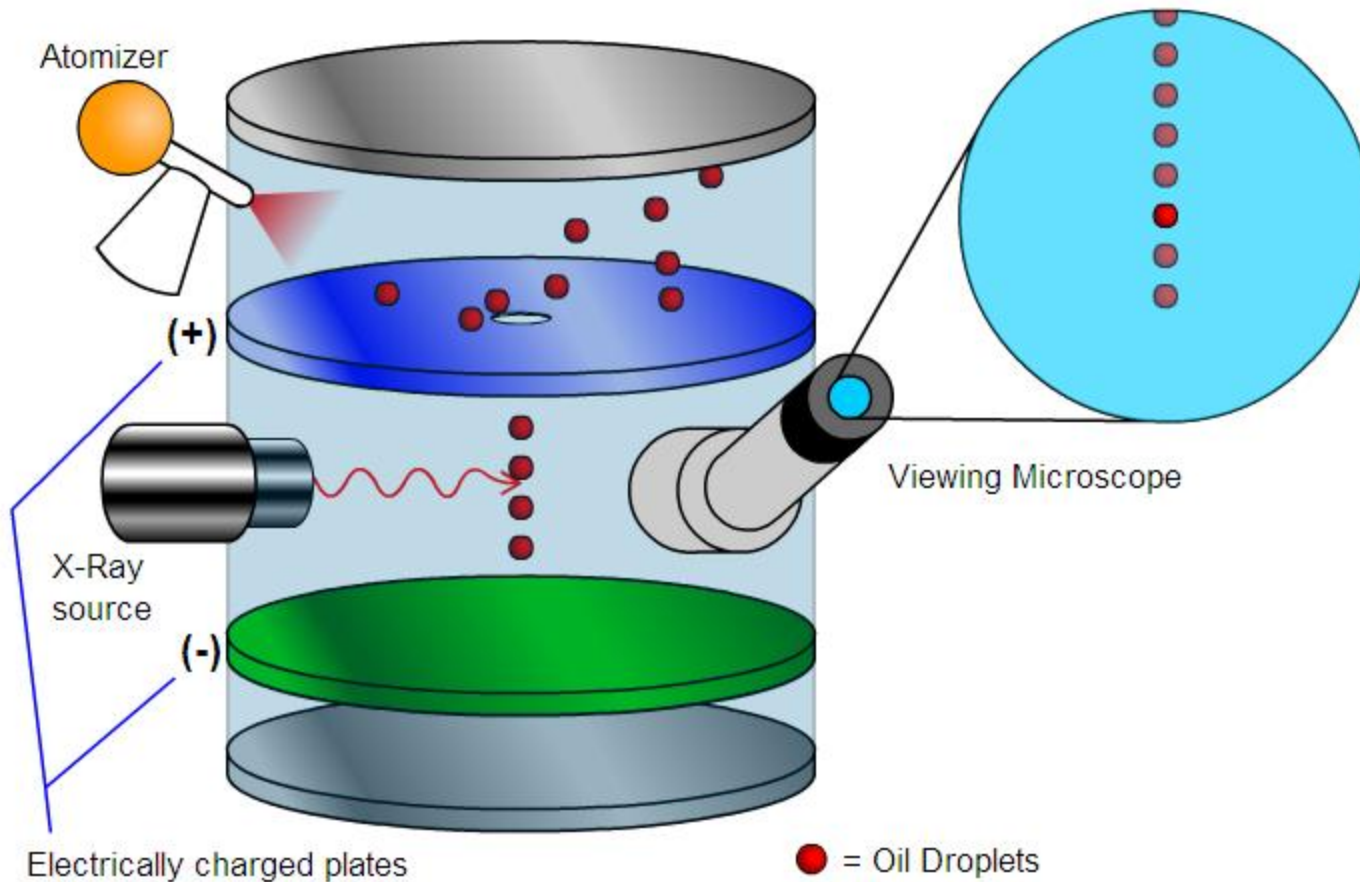


Robert Millikan (1868 – 1953)
– determinarea sarcinii electronului

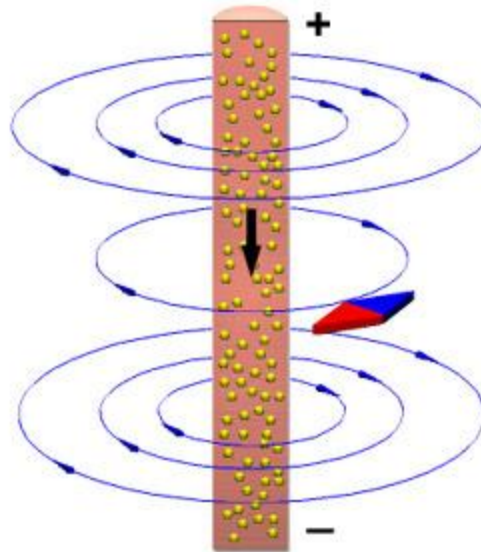


Experimentul lui Millikan – determinarea sarcinii electronului

Millikan's Experiment

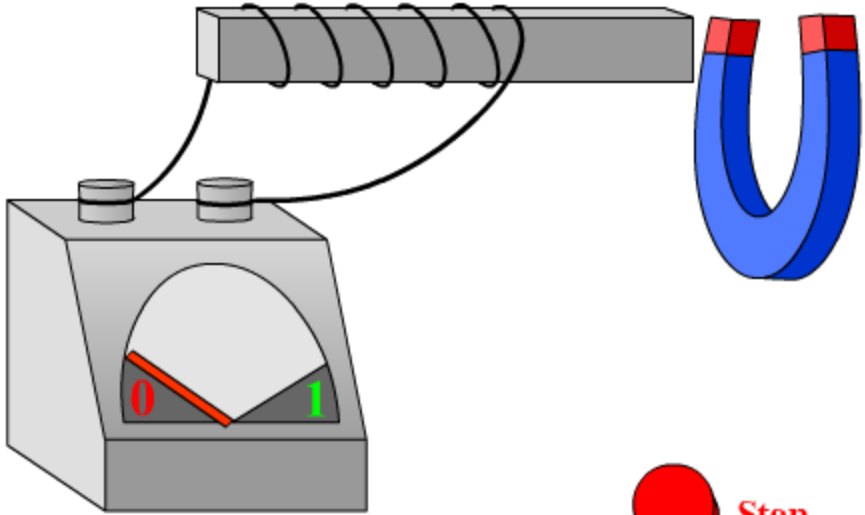
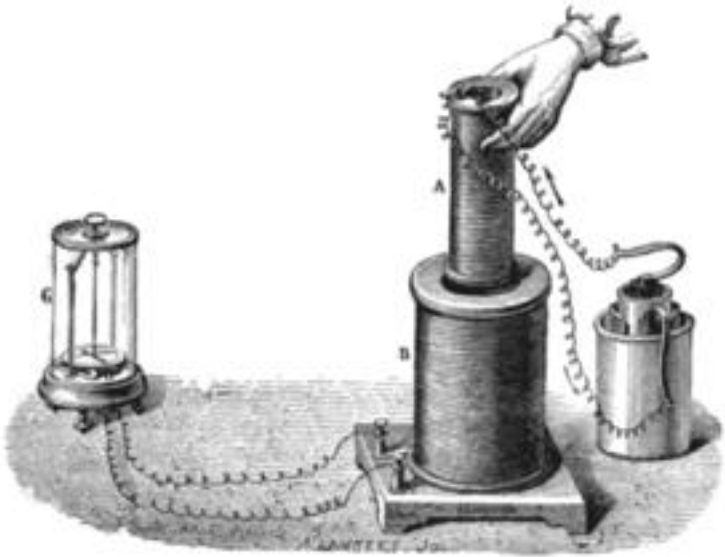


Curentul electric generează câmp magnetic – Legea Ampere



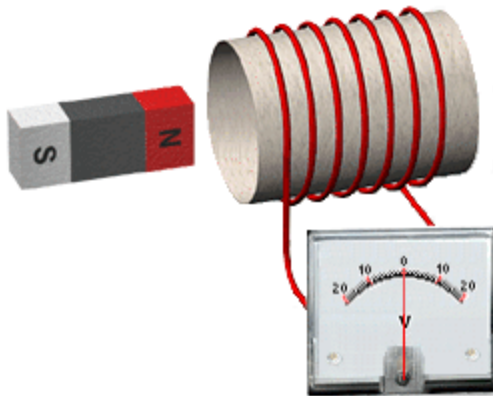
Michael Faraday (1791-1867)

–inductia electromagnetica



Inducția electromagnetică

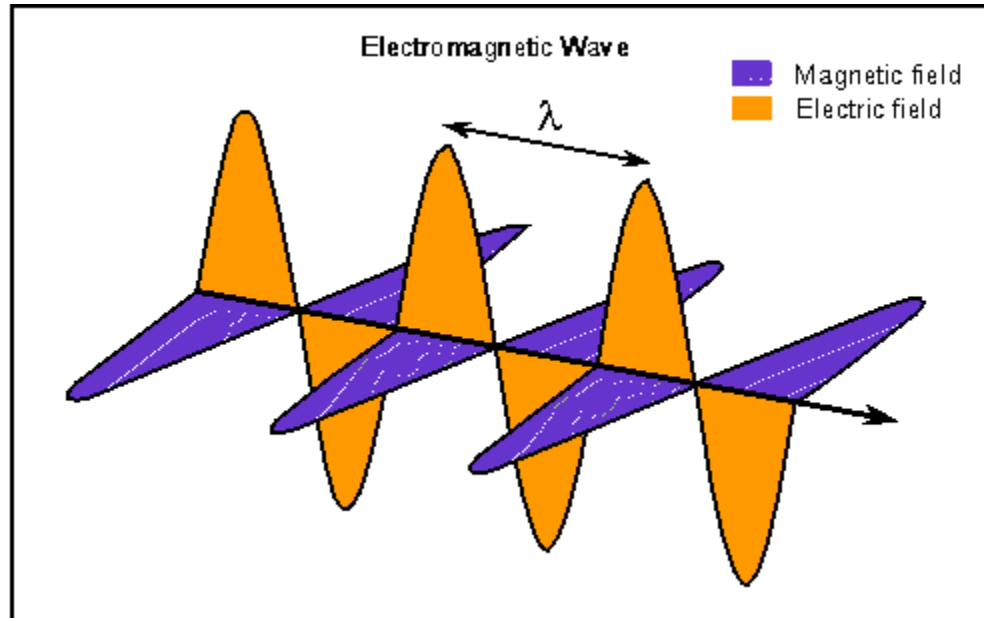
Faradays Law of Induction



Kieran Mckenzie

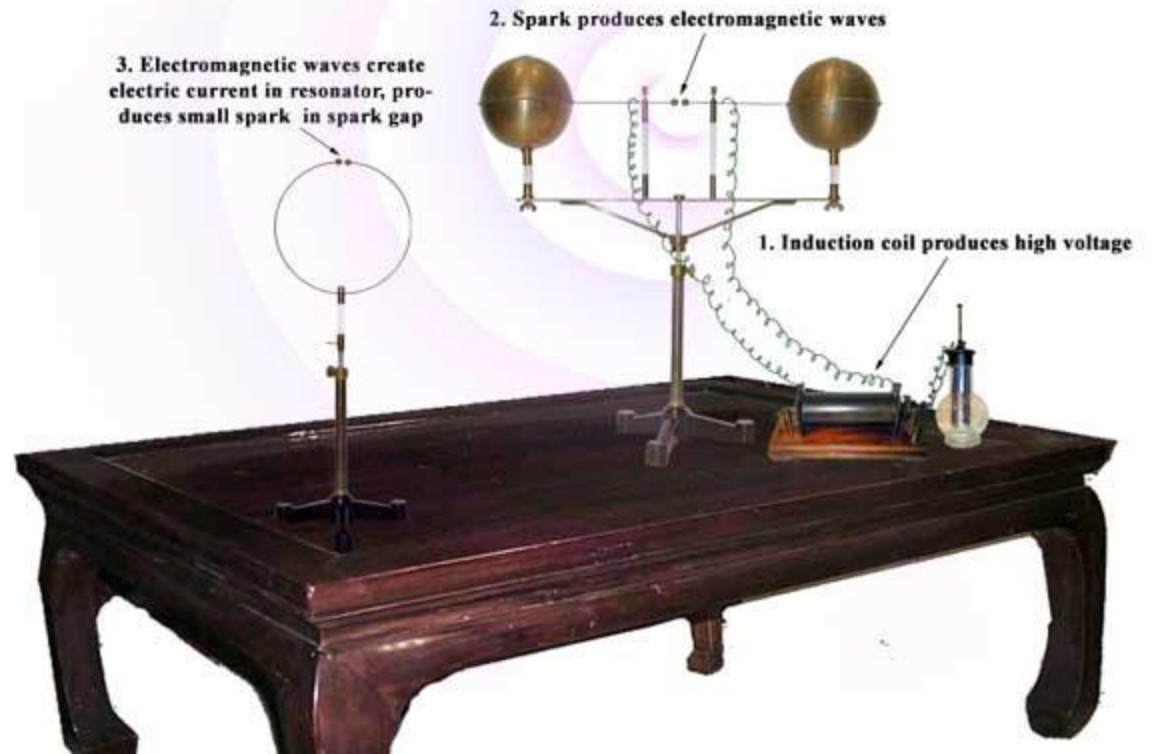


Unde electromagnetice





Heinrich Hertz (1857-1894)





The Electromagnetic Spectrum describes how radiation occurs in different forms, distinguished by their wavelengths. The interaction of electromagnetic radiation with matter depends on wavelength. For example, some atmospheric gases such as carbon dioxide absorb longwave radiation, while others, such as ozone, absorb ultraviolet.

