

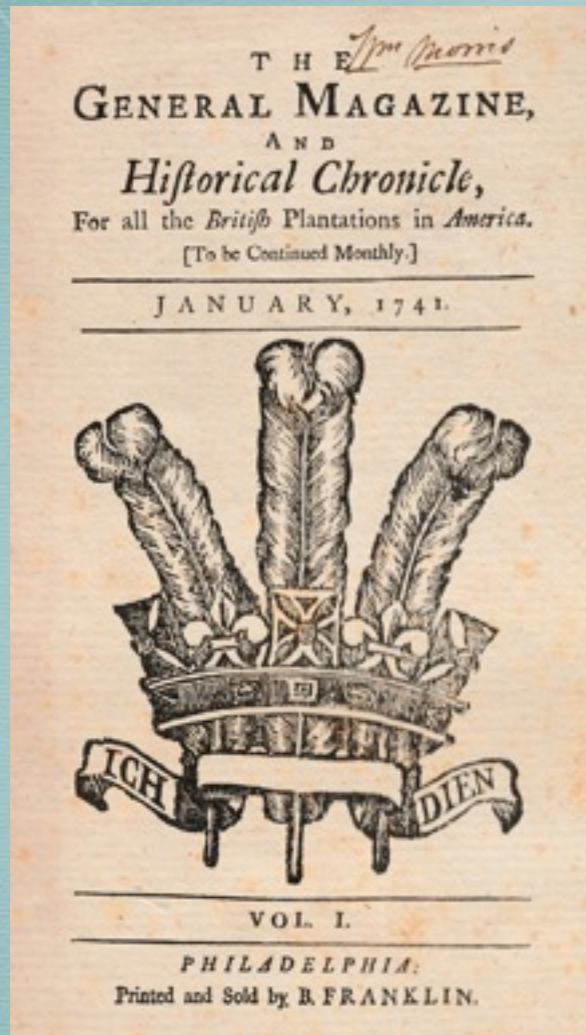
The Story of an Atom

Dr. Jimmy Sebastian - 116

lightning



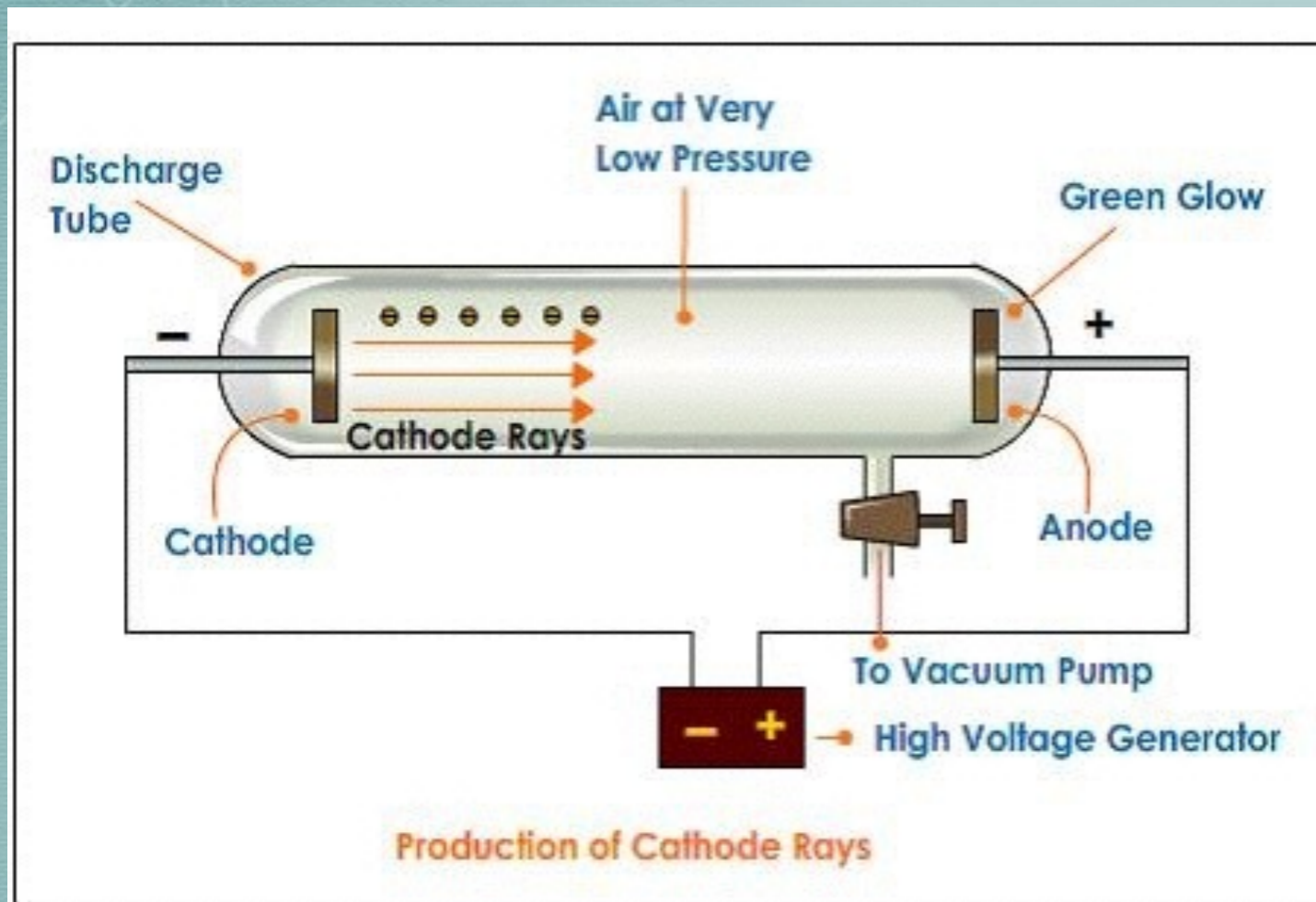
Benjamin franklin 1706 - 1790



*Benjamin Franklin
Drawing Electricity from the Sky c. 1816*

Michael Faraday

1791 - 1867



In 1838, Michael Faraday passed a current through a rarefied air filled glass tube and noticed a strange light arc with its beginning at the cathode (negative electrode) and its end are at the anode (positive electrode).

John Dalton

1766 - 1844



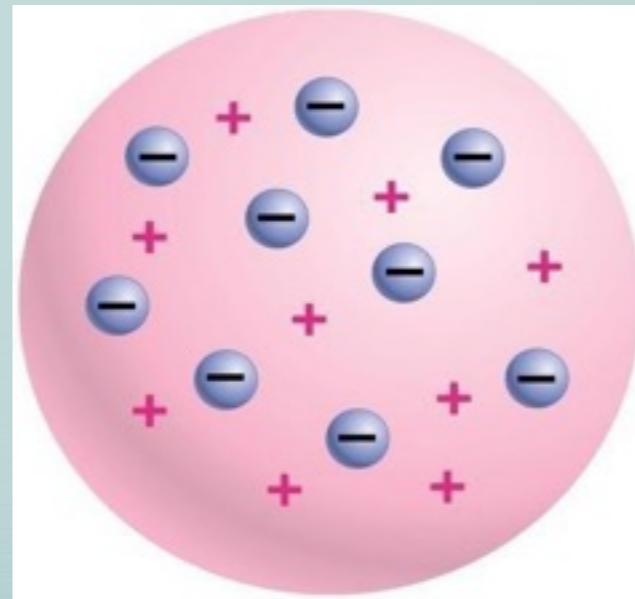
All matter is made of atoms.
Atoms are indivisible and indestructible.

J J Thomson

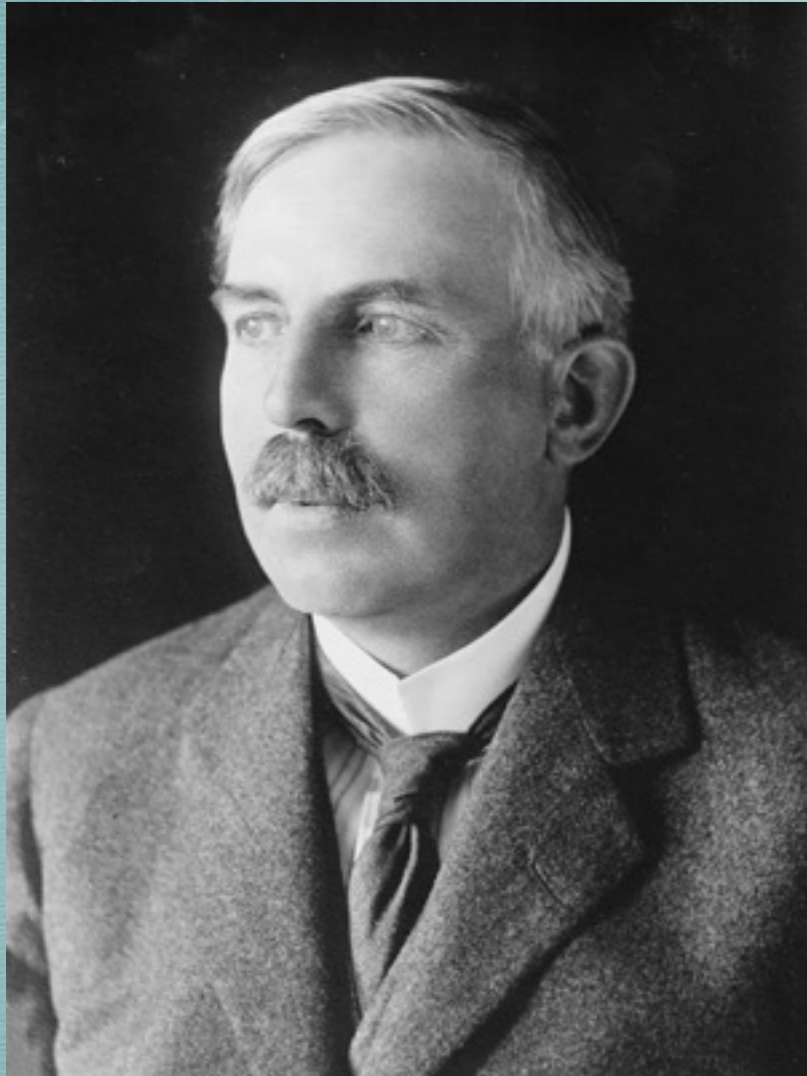


1766 - 1844

- 1) Cathode rays are made up of negatively charged particles.
- 2) They are much smaller than the atom.



Ernest Rutherford



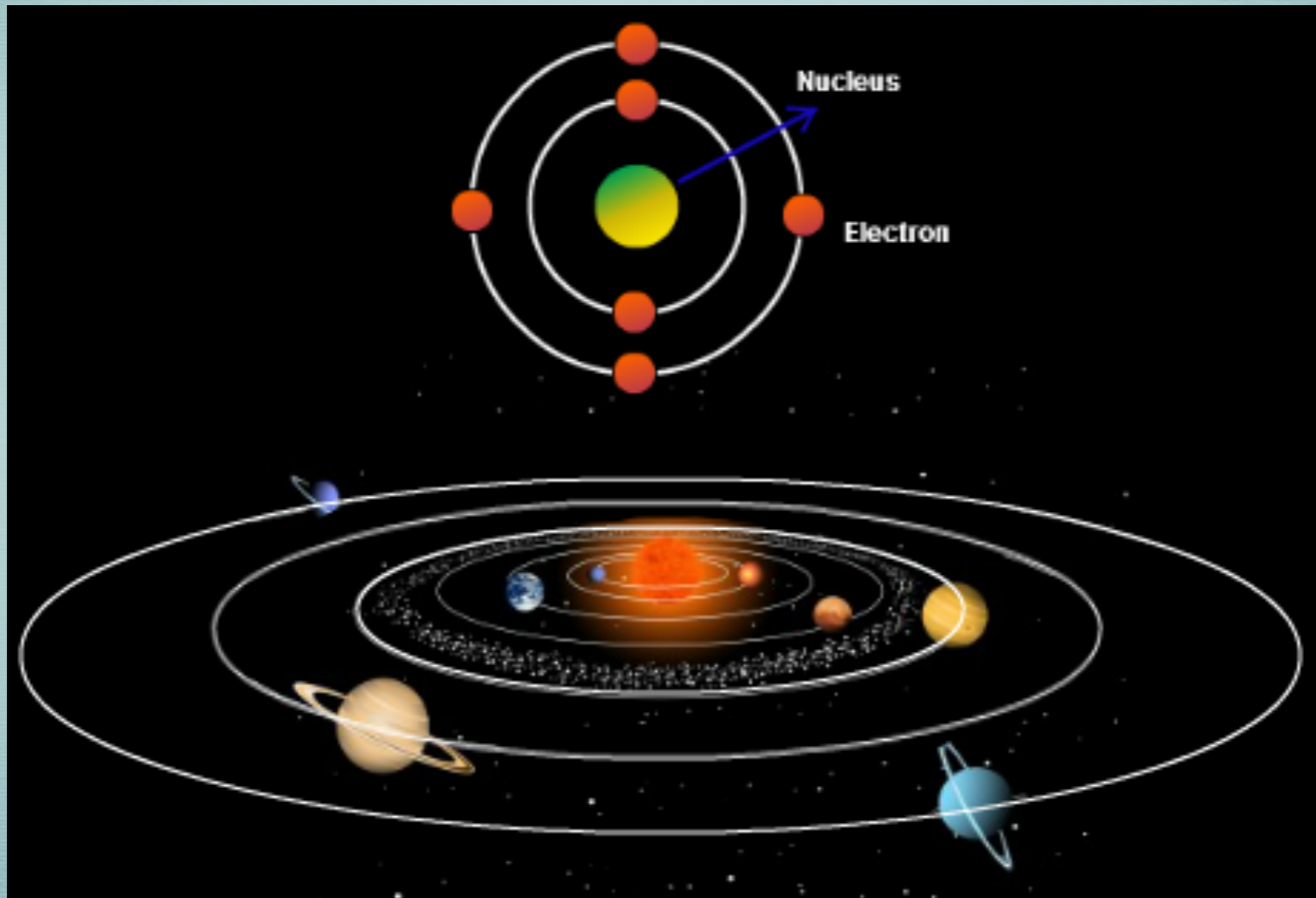
What is the structure of the atom?

1871 - 1937

Rutherford's Scattering experiment



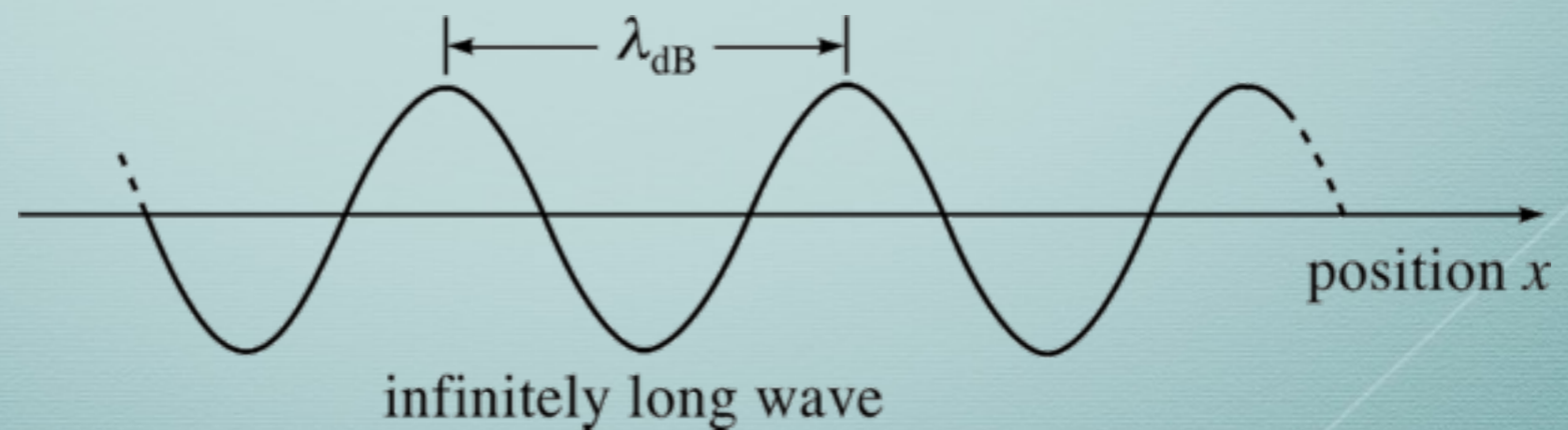
Structure of the atom



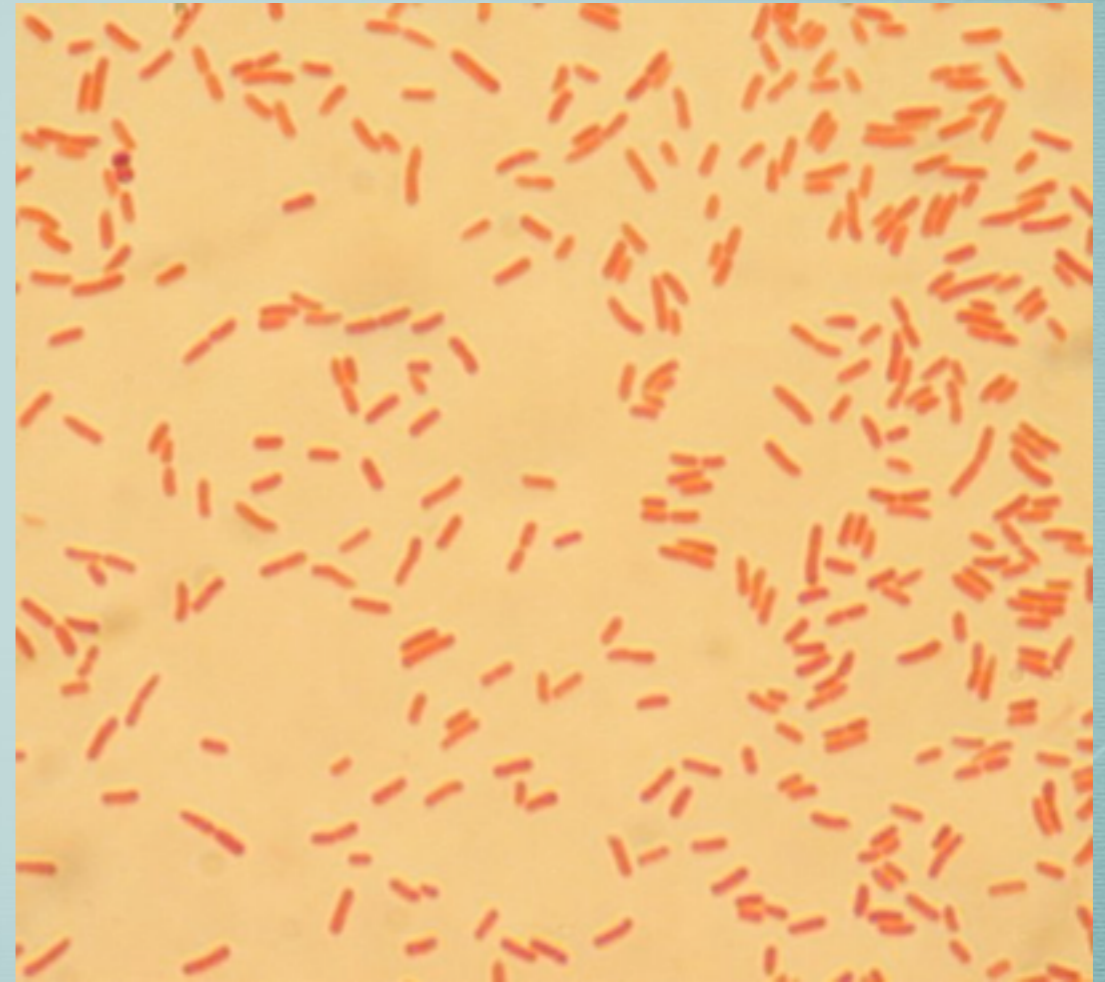
Quantum mechanics

Matter waves

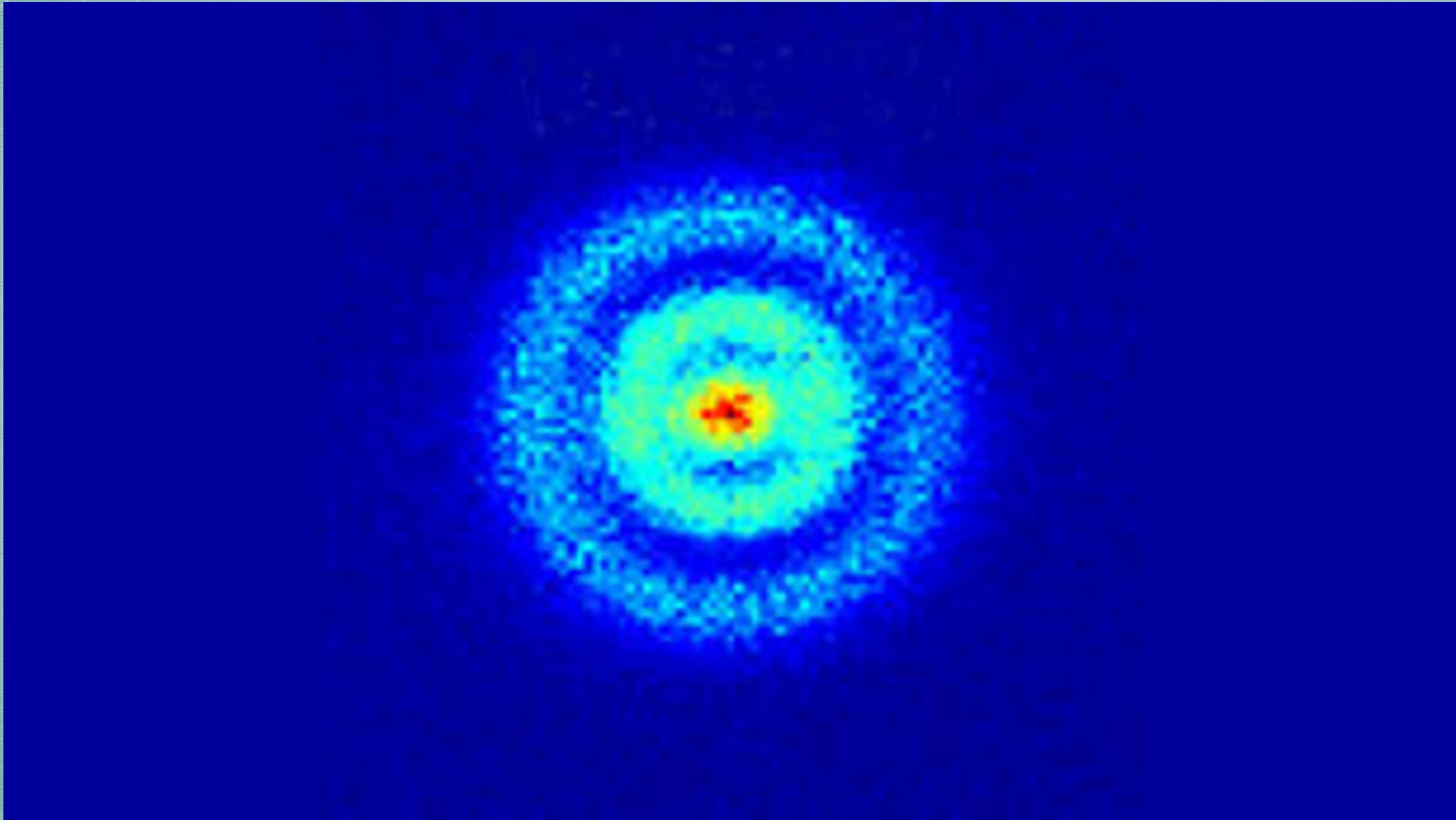
$$\lambda = \frac{h}{mv}$$



Electron microscope



Hydrogen atom

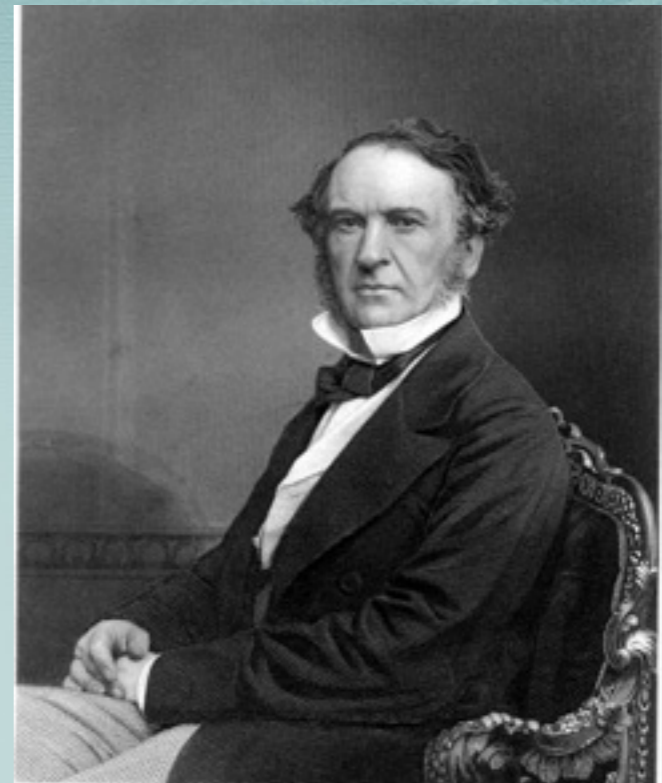


Boy and his atom



Why Study Physics

But what good is this electricity ?



William Ewart Gladstone



Michael Faraday

May be soon you can tax it.

Atom trapping

- Quantum Computation
- Quantum cryptography
- Quantum lithography
- Quantum simulator
- Superconductivity
- Superfluidity
- The list will go on