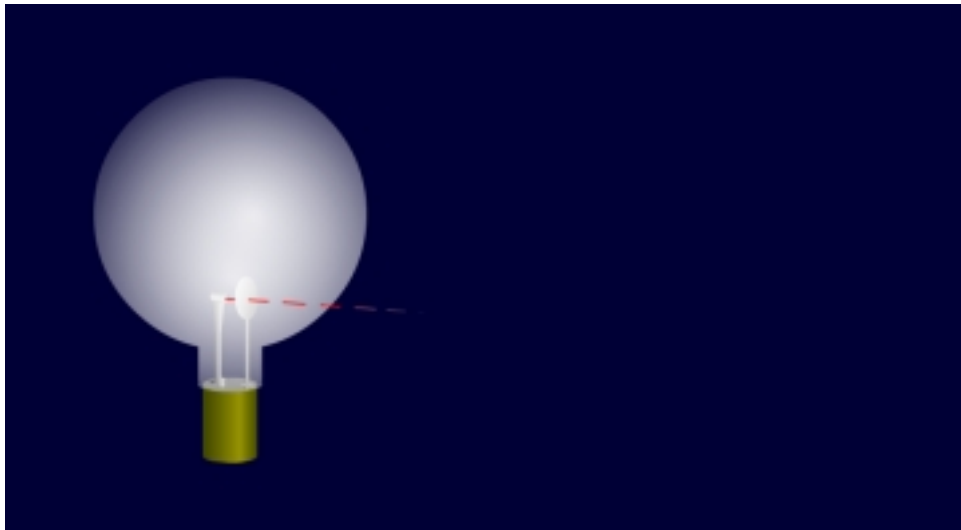


Effect of Lorentz force on an electron beam



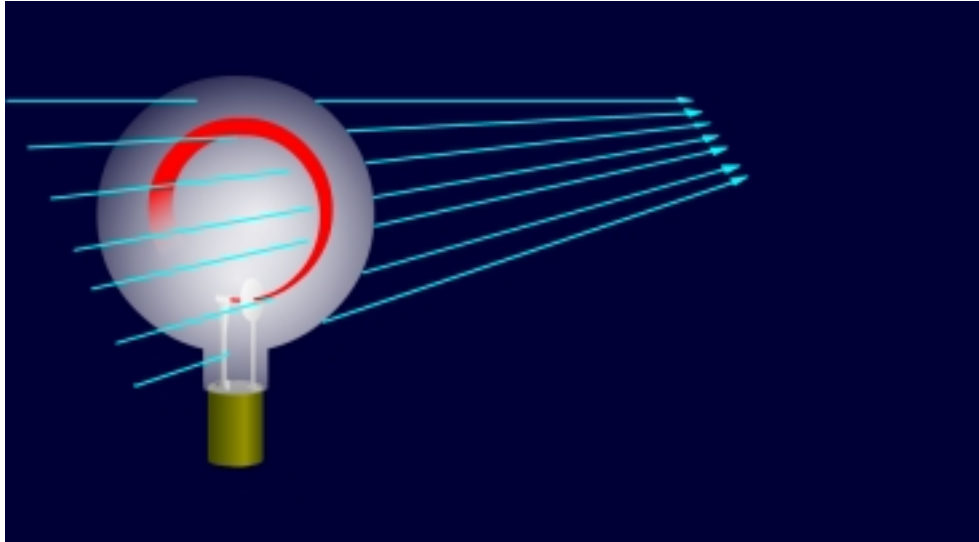
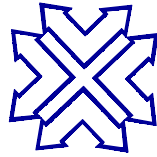
Attention: To see the animation, you need a player of macromedia (Flash5)

Author:: BIGS 2002 (C. Bluck, J. Gans, A. Gleixner, Prof. W. Heimbrod, S. Stallmann)

Explanation

Without magnetic field

Electrons emerge from the glowing cathode (-). On their path to the anode (+), they are accelerated by the potential difference applied. The electrons move in a straight line.



Explanation

With magnetic field

Interaction with a magnetic field (such as the field of a coil) produces a curvature in the previously straight path of the electrodes. The magnetic field, or more precisely the Lorentz force, forces the electrodes onto a circular path perpendicular to the magnetic field force lines.