

- Bubble chamber invented by Donald A. Glazer is a large vessel containing superheated transparent liquid and is used to identify electric particles moving through the liquid components- the main component is superheated liquid there is uniform magnetic field, in the chamber this magnetic field produces force on charged particle and thus they move in a definite "signature" Path which is different from each particle.
- When charged particle move inside the superheated liquid in their determined path in the bubble chamber, the movement initiates phase transition and the superheated liquid starts vaporizing, this creates visible tracks, as the particles form bubbles along the path they move and these are captured in the camera fitted in the chamber.
- Trials are read by
right hand rule for positive charge where
Thumb is velocity's direction
Index finger is magnetic field's direction
Middle finger is direction of applied force
Left hand rule for negative charge where
Thumb is velocity's direction
Index finger is magnetic field's direction
Middle finger is direction of force.
The charged particles follow a curved path because the force applied to them is perpendicular to the direction of motion they already have.
The must present factor here is magnetic field.
- The direction of force depends on the nature of charge on the particle. According to right hand rule, the thumb denotes the direction of velocity odd positive charge and middle finger denotes the direction of applied force due to magnetic field so the particle moves in anticlockwise direction as a result.
According to left hand rule for negative charge the particle will move in clockwise direction.
- Direction of the curve depends on the nature of charge whereas
diameter (d) = $\frac{mv}{qB}$
Where, m=mass of particle
V= velocity of particle
q= charge of particle
B= magnetic field
- Some particles do not get deviated as the charge on them is zero
putting $q=0$ in formula we get $d= \infty$
That is a straight line.
- Bremsstrahlung means "braking radiation" all accelerated charged particles will produce electromagnetic radiation. More the acceleration more the electromagnetic radiation.
On comparing a electron and a antiproton. The electron will accelerate 2000 times faster as it has 2000 lesser mass than the antiproton. Due to this high acceleration it starts moving in the direction of previous movement in a spiral pattern.
- Equation of motion is
 $F = qvB$
 $Mv \times v/r = qvB$

$$r = Mv/qB$$

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Name	Charge	Relative mass	Relative velocity
A	+2	72amu	5Vb
B	+1	4amu	Vb
C	-2	4amu	5Vb
D	-2	4amu	5Vb

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