

(4)

الفئة الرابعة - فيزياء - رنة فيزياء - 1411

One can show that:

$$\frac{d\vec{M}}{dt} = \vec{\omega} \times \vec{M} \quad (8)$$

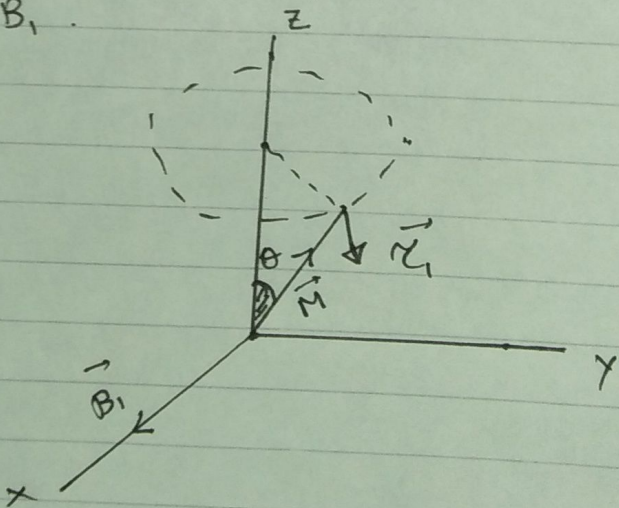
$$\text{and } \vec{\tau} = -\frac{\hbar}{g\mu_B} \frac{d\vec{M}}{dt} \quad (9)$$

with ω : Larmor frequency.

Now what is the torque due to \vec{B}_1 ?
Does it tend to decrease the angle θ
or increase it?

In fig. 3 we show the direction of the torque $\vec{\tau}_1$ due to \vec{B}_1 . It should be perpendicular to the plane containing \vec{M} and \vec{B}_1 .

Fig. 3



To continue next lecture.