**HW assignment 13** (Due Wed Dec 9 at 7 p.m.by email).

**Problem 1**

Find the magnetic moment of the uniformly charged spherical shell (charge $Q$, radius $R$) spinning with angular velocity $\omega$ about the $z$ axis.

**Problem 2** (Pr. 5.55 from Griffiths)

A magnetic dipole $\vec{m} = -m_0\hat{e}_3$ is located at the origin, in an otherwise uniform magnetic field $\vec{B} = B_0\hat{e}_3$. Show that there exist a spherical surface (centered at the origin) through which no magnetic field lines pass and find the radius of this surface.