Classical Electrodynamics

Problem set 8
Radiation of light


2. A ball of radius $a$ with the uniform magnetization $\mathbf{M}$ rotates with a permanent angular velocity $\Omega$ around the axis $z$ which makes an angle $\phi$ with $\mathbf{M}$. Assuming magnetic dipole radiation find the angular distribution and the total power of radiation. (7 points)