PHY505 - Classical Electrodynamics
Extra Credit Queston
Due: 8:00AM, Friday, Dec. 20, 2002

A sphere of radius a carries a total charge Q distributed uniformly over its surface. The sphere is rotated about a diameter with constant angular velocity ω. Find the vector potential $\vec{A}$ and the magnetic induction $\vec{B}$ at all points inside and outside the sphere. Give your answer in cylindrical coordinates about the axis of rotation.

In completing this problem I have not received assistance from any other persons and have consulted only Jackson's "Classical Electrodynamics" and my PHY505 class notes as sources.

Signature:_____