

Problem set 11

Problem 1

In the 21st lecture we calculated the properties of a magnetic dipole antenna. If we stack parallel two magnetic dipole antenni with a distance d between them, and opposite currents, we have a magnetic quadrupole antenna. Find its radiation fields if $b, d \ll R$, where R is the distance from a mid point on the z -axis lying through the antenni to an observer, and b is their radii. Find the far fields and the radiation pattern for the magnetic quadrupole antenna.

The problem is due Monday March 31 2025 at 20:00