

Answer on Question #55815, Physics / Electromagnetism

Task:

Two dipoles each of dipole moment p are placed $2r$ distance apart. What is the electric field intensity at the midpoint of line joining the dipoles?

Answer:

$$\vec{E}(\vec{r}) = \frac{1}{4\pi\epsilon} \left(-\frac{\vec{p}}{r^3} + \frac{3(\vec{p} \cdot \vec{r})\vec{r}}{r^5} \right)$$