

E.9 Dirac algebra

Check that all matrices M given on p. 2-71 satisfy

$$\bar{M} = M.$$

E.10 Derive Maxwell's equations

from the Lagrange density

on p. 2-77 using Hamilton's principle.

E.11 Photon polarisations

Consider a photon with momentum \vec{k} in z -direction. What are the polarisation vectors $\vec{\epsilon}$ if the photon has right (left) circular polarisation?