

4-Vector Potential $\mathbf{A} = A^t \gamma_t + A^x \gamma_x + A^y \gamma_y + A^z \gamma_z$

8-component real spinor $\psi = \psi + \psi^{tx} \gamma_t \wedge \gamma_x + \psi^{ty} \gamma_t \wedge \gamma_y + \psi^{tz} \gamma_t \wedge \gamma_z + \psi^{xy} \gamma_x \wedge \gamma_y + \psi^{xz} \gamma_x \wedge \gamma_z + \psi^{yz} \gamma_y \wedge \gamma_z + \psi^{txyz} \gamma_t \wedge \gamma_x \wedge \gamma_y \wedge \gamma_z$

$$\begin{aligned}
\text{Dirac Equation } \nabla \psi I \sigma_z - e \mathbf{A} \psi - m \psi \gamma_t = 0 = & (-e A^t \psi - e A^x \psi^{tx} - e A^y \psi^{ty} - e A^z \psi^{tz} - m \psi - \partial_y \psi^{tx} - \partial_z \psi^{txyz} + \partial_x \psi^{ty} + \partial_t \psi^{xy}) \gamma_t \\
& + (-e A^t \psi^{tx} - e A^x \psi - e A^y \psi^{xy} - e A^z \psi^{xz} + m \psi^{tx} + \partial_y \psi - \partial_t \psi^{ty} - \partial_x \psi^{xy} + \partial_z \psi^{yz}) \gamma_x \\
& + (e A^x \psi^{xy} - e A^y \psi - e A^z \psi^{yz} + (-e A^t + m) \psi^{ty} - \partial_x \psi + \partial_t \psi^{tx} - \partial_y \psi^{xy} - \partial_z \psi^{xz}) \gamma_y \\
& + (e A^x \psi^{xz} + e A^y \psi^{yz} - e A^z \psi + (-e A^t + m) \psi^{tz} + \partial_t \psi^{txyz} - \partial_z \psi^{xy} + \partial_y \psi^{xz} - \partial_x \psi^{yz}) \gamma_z \\
& + (e A^x \psi^{ty} - e A^y \psi^{tx} - e A^z \psi^{txyz} + (-e A^t - m) \psi^{xy} - \partial_t \psi + \partial_x \psi^{tx} + \partial_y \psi^{ty} + \partial_z \psi^{tz}) \gamma_t \wedge \gamma_x \wedge \gamma_y \\
& + (-e A^t \psi^{xz} + e A^x \psi^{tz} + e A^y \psi^{txyz} - e A^z \psi^{tx} - m \psi^{xz} + \partial_x \psi^{txyz} + \partial_z \psi^{ty} - \partial_y \psi^{tz} - \partial_t \psi^{yz}) \gamma_t \wedge \gamma_x \wedge \gamma_z \\
& + (-e A^t \psi^{yz} - e A^x \psi^{txyz} + e A^y \psi^{tz} - e A^z \psi^{ty} - m \psi^{yz} - \partial_z \psi^{tx} + \partial_y \psi^{txyz} + \partial_x \psi^{tz} + \partial_t \psi^{xz}) \gamma_t \wedge \gamma_y \wedge \gamma_z \\
& + (-e A^t \psi^{txyz} - e A^x \psi^{yz} + e A^y \psi^{xz} - e A^z \psi^{xy} + m \psi^{txyz} + \partial_z \psi - \partial_t \psi^{tz} - \partial_x \psi^{xz} - \partial_y \psi^{yz}) \gamma_x \wedge \gamma_y \wedge \gamma_z
\end{aligned}$$