

Results with all scalar variables declared as real

$$X = t\gamma_t + x\gamma_x + y\gamma_y + z\gamma_z + w\gamma_w$$

$$K = k^t\gamma_t + k^x\gamma_x + k^y\gamma_y + k^z\gamma_z + k^w\gamma_w$$

$$K \cdot X = k^t t - k^w w - k^x x - k^y y - k^z z$$

$$I^2 = 1$$

$$I_{xyzw} = I\gamma_x\gamma_y\gamma_z\gamma_w = \gamma_t$$

$$\left(I\gamma_x\gamma_y\gamma_z\gamma_w\right)^2 = 1$$

$$e^{I_{xyzw}K \cdot X} = \cosh\left(-k^t t + k^w w + k^x x + k^y y + k^z z\right) - \sinh\left(-k^t t + k^w w + k^x x + k^y y + k^z z\right)\gamma_t$$