Erratum to: Type-4 spinors: transmuting from Elko to single-helicity spinors

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The last co-Author's name in the original manuscript is not correct. In Sect. 3 of the original article, the Lorentz boost parameter presented in Eqs. (15) and (18), which refers to $\psi_{2\downarrow}(\mathbf{p})$ and $\psi_{3\downarrow}(\mathbf{p})$, must to be replaced. The correct form is

$$\psi_{2\downarrow}(\mathbf{p}) = \sqrt{m} \begin{pmatrix} -i\mathcal{B}^-(p) \sin(\theta/2)e^{-i\phi/2} \\ i\mathcal{B}^-(p) \cos(\theta/2)e^{i\phi/2} \\ -\kappa_2\mathcal{B}^+(p) \sin(\theta/2)e^{-i\phi/2} \\ \kappa_2\mathcal{B}^+(p) \cos(\theta/2)e^{i\phi/2} \end{pmatrix}. \quad (1)$$

and

$$\psi_{3\downarrow}(\mathbf{p}) = \sqrt{m} \begin{pmatrix} i\kappa_3\mathcal{B}^-(p) \sin(\theta/2)e^{-i\phi/2} \\ -i\kappa_3\mathcal{B}^-(p) \cos(\theta/2)e^{i\phi/2} \\ -\mathcal{B}^+(p) \sin(\theta/2)e^{-i\phi/2} \\ \mathcal{B}^+(p) \cos(\theta/2)e^{i\phi/2} \end{pmatrix}. \quad (2)$$

After performing the above modification, Eqs. (26) and (27) in Sect. 5, now, are replaced by

$$\sum_{i=1}^4 \psi_i(\mathbf{p}) \bar{\psi}_i(\mathbf{p}) = 2\gamma_\mu p^\mu, \quad (3)$$

where the matrix $\gamma_\mu p^\mu$ reads

$$\gamma_\mu p^\mu = \begin{pmatrix} 0 & 0 & E + p \cos(\theta) & p \sin(\theta)e^{-i\phi} \\ 0 & 0 & p \sin(\theta)e^{i\phi} & E - p \cos(\theta) \\ E - p \cos(\theta) & -p \sin(\theta)e^{-i\phi} & 0 & 0 \\ -p \sin(\theta)e^{i\phi} & E + p \cos(\theta) & 0 & 0 \end{pmatrix}, \quad (4)$$

after Eq. (28) on the original article, the correct is to note that the spin sums is Lorentz invariant. The operator that appears on the right hand side in Eq. (3) does not annihilates type-4 spinors.

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