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# Erratum: Impact parameter dependent parton distributions and off-forward parton distributions for $\zeta \to 0$ [Phys. Rev. D 62, 071503(R) (2000)]

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Throughout the paper, a sign error occurred in the exponents of Fourier transforms. Specifically, Eq. (2.4) should read

$$\mathcal{F}_{\psi}(\vec{q}) \equiv \int d^3x e^{i\vec{q}\cdot\vec{x}} \langle \Psi | \rho(\vec{x}) | \Psi \rangle = \int \frac{d^3p}{\sqrt{2E_{\vec{p}} 2E_{\vec{p}'}}} \Psi^*(\vec{p}+\vec{q}) \Psi(\vec{p}) \langle \vec{p}' | \rho(\vec{0}) | \vec{p} \rangle$$
$$= \frac{1}{2} \int d^3p \frac{E_{\vec{p}} + E_{\vec{p}'}}{\sqrt{E_{\vec{p}} E_{\vec{p}'}}} \Psi^*(\vec{p}+\vec{q}) \Psi(\vec{p}) F(q^2). \tag{2.4}$$

Equation (3.3) should read

$$\mathcal{F}_{\Psi}(x, \vec{q}_\perp) \equiv \int d^2 q_\perp e^{i\vec{q}_\perp \cdot \vec{b}_\perp} f_{\Psi}(x, \vec{b}_\perp)$$
$$= \int \frac{d^2p_\perp \Psi^*(\vec{p}_\perp') \Psi(\vec{p}_\perp)}{\sqrt{2E_{\vec{p}} 2E_{\vec{p}'}}} \int dx^- e^{ixp^+x^-} \langle p' | \overline{\psi}(0, \vec{0}_\perp) \psi(x^-, \vec{0}_\perp) | p \rangle$$
$$= \int \frac{d^2p_\perp \Psi^*(\vec{p}_\perp') \Psi(\vec{p}_\perp)}{\sqrt{2E_{\vec{p}} 2E_{\vec{p}'}}} f_{\zeta}(x, q^2). \tag{3.3}$$

Equation (4.1) should read

$$f(x_{Bj}, \vec{b}_\perp, Q^2) = \int \frac{d^2 q_\perp}{2\pi} e^{-i\vec{q}_\perp \vec{b}_\perp} f_{\zeta=0}(x_{Bj}, -\vec{q}_\perp^{\,2}, Q^2). \tag{4.1}$$

Equation (5.1) should read

$$f(x_{Bj}, \vec{b}_\perp) = \int \frac{d^2 q_\perp}{2\pi} e^{-i\vec{q}_\perp \vec{b}_\perp} f_{\zeta=0}(x_{Bj}, -\vec{q}_\perp^{\,2}). \tag{5.1}$$

In the case of the generalized parton distributions $H(x,0,-\vec{q}_\perp^{\,2})$ and $\widetilde{H}(x,0,-\vec{q}_\perp^{\,2})$, the sign in the exponent does not matter since they are even functions of $\vec{q}$ and therefore the main conclusions of the paper remain unchanged. However, when one considers generalized parton distributions with helicity flip, one encounters odd functions of $\vec{q}$ and the sign in the exponent becomes crucial.

I would like to thank Markus Diehl for pointing out this error.

 