Erratum: Low-energy photon and pion scattering in holographic QCD

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In this erratum we correct a typo which was found in eq. (4.2) in the original article [1]. We rewrite in full the correct equation

$$\sigma = \frac{\alpha^2 \pi}{8} \int_{t_-}^{t_+} dt\, H(s,t)\,,$$

with $H = |H_{++}|^2 + |H_{+-}|^2$, $t_\pm = m_\pi^2 - \frac{s}{2}(1 \mp \beta(s)Z)$, $\beta(s) = \sqrt{1 - 4m_\pi^2/s}$, for scattering angles in the range $|\cos\theta| < Z \leq 1$. This is the $\gamma\gamma \to \pi^+\pi^-$ cross section that correspond to the polarizabilities ($H_{++}(s,t)$ and $H_{+-}(s,t)$) defined following the notations provided by refs. [2, 3, 5]. In the convention of ref. [4] the $\gamma\gamma \to \pi^0\pi^0$ cross section is given by this equation with an additional 1/2 factor.

The references quoted here as [2–5] appear in the original article [1] as refs. [23–26], respectively.

All the other results, plots and conclusions in the original article [1] remain unchanged.

References

[1] P. Colangelo, J.J. Sanz-Cillero and F. Zuo, *Low-energy photon and pion scattering in holographic QCD*, *JHEP* **06** (2013) 020 [`arXiv:1304.3618`] [INSPIRE].

[2] U. Burgi, *Charged pion pair production and pion polarizabilities to two loops*, *Nucl. Phys.* **B 479** (1996) 392 [`hep-ph/9602429`] [INSPIRE].

[3] U. Burgi, *Charged pion polarizabilities to two loops*, *Phys. Lett.* **B 377** (1996) 147 [`hep-ph/9602421`] [INSPIRE].

[4] J. Gasser, M.A. Ivanov and M.E. Sainio, *Low-energy photon-photon collisions to two loops revisited*, *Nucl. Phys.* **B 728** (2005) 31 [`hep-ph/0506265`] [INSPIRE].

[5] J. Gasser, M.A. Ivanov and M.E. Sainio, *Revisiting $\gamma\gamma \to \pi^+\pi^-$ at low energies*, *Nucl. Phys.* **B 745** (2006) 84 [`hep-ph/0602234`] [INSPIRE].