Erratum: QCD analytic perturbation theory: From integer powers to any power of the running coupling [Phys. Rev. D 72, 074014 (2005)]

A. P. Bakulev, S. V. Mikhailov, and N. G. Stefanis

(Received 25 November 2005; published 29 December 2005)

DOI: 10.1103/PhysRevD.72.119908 PACS numbers: 11.15.Bt, 12.38.Bx, 12.38.Cy, 99.10.Cd

(i) In Section IV, Fig. 4(a) should be replaced by the following graphics.

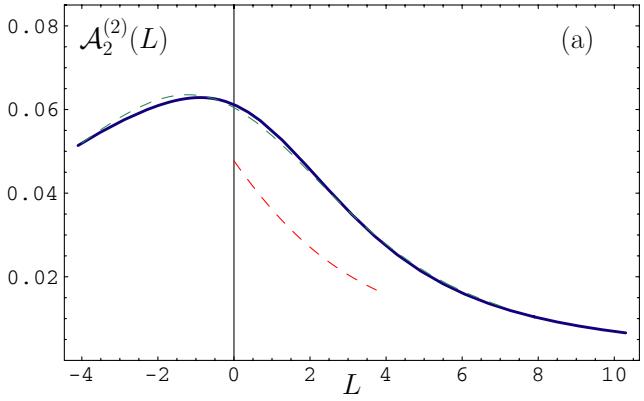

FIG. 4 (color online). (a) Comparison of different results for $\mathcal{A}_2^{(2)}(L)$. The solid line corresponds to $\mathcal{A}_2^{(2);\mathrm{FAPT}}(L)$, computed analytically via Eq. (3.29); $\mathcal{A}_2^{(2);\mathrm{num}}(L)$ (dashed line) is derived by means of a numerical integration. The dotted line represents the available results of the numerical procedure of Magradze in [23].

(ii) In Appendix B of the journal version, Eq. (B13) should be replaced by

$$\varphi_{(2)}(\sigma) = \arccos\left[\frac{L(\sigma) + c_1 \ln(\sqrt{(L(\sigma) + c_1)^2 + \pi^2})}{R_{(2)}(\sigma)}\right]. \tag{B13}$$

This expression should be used to evaluate Eq. (B10). This is exactly the reason why Fig. 4(a) had to be corrected. One appreciates that now the two calculations for $L \leq 0$ agree much better than before. Figure 3 is affected by this correction as well but the corrected figure is not visually distinguishable from that published in the journal version. All other results are not affected by this correction.

