

Erratum: Exact correlators on the Wilson loop in $\mathcal{N} = 4$ SYM: localization, defect CFT, and integrability

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Typos in the formulae. A factor $1/\pi^2$ was missing in both equations in (6.28). The correct equations are

$$\begin{aligned} \langle : \tilde{\Phi}^{L_1} :: \tilde{\Phi}^{L_2} : \rangle \Big|_{g \rightarrow \infty} &= \frac{e^{4\pi g}}{2(2g)^{3/2}\pi^2} \left(-\frac{g}{\pi}\right)^{L_1} L_1! \delta_{L_1 L_2}, \\ \langle : \tilde{\Phi}^{L_1} :: \tilde{\Phi}^{L_2} :: \tilde{\Phi}^{L_3} : \rangle \Big|_{g \rightarrow \infty} &= \frac{e^{4\pi g}}{2(2g)^{3/2}\pi^2} \left(-\frac{g}{\pi}\right)^{\frac{L_{\text{tot}}}{2}} \frac{L_1! L_2! L_3! d_{L_1, L_2, L_3}}{L_{12|3!} L_{23|1!} L_{31|2!}}. \end{aligned} \quad (6.28)$$

The same factor was missing in the sentence right below (6.28), “Note that the overall coefficient $e^{4\pi g}/(2(2g)^{3/2})$ is precisely the expectation value...”. The correct one is “Note that the overall coefficient $e^{4\pi g}/(2(2g)^{3/2}\pi^2)$ is precisely the expectation value...”.

Correction concerning finite N_c effect. Throughout the paper, we claimed that the results in the paper are valid not just at large N_c but also at finite N_c . However, after the publication of the paper, we realized that there is yet another contribution, namely the mixing with the multi-trace operators, which becomes important at the non-planar level. Therefore, although it is possible to incorporate such an additional contribution into the general framework discussed in this paper, the results presented in this paper, as they are, are valid only in the planar large N_c limit. Consequently, the nonplanar correction to the measure that we discussed in section 5.5 only captures a part of the full non-planar results. The physical origin of this additional contribution and the way to incorporate it into our formalism are elucidated in the paper which we wrote later, [1]. The sentences that are affected by this correction are:

1. In the third to last sentence in Abstract, the phrase “as well as obtaining their finite N_c generalization” must be removed.
2. In page 4, the last sentence in the second paragraph, “Moreover, since the Wilson loop . . . Bremsstrahlung function $B_L(\theta)$ ” must be removed.
3. In the title of section 4.2, “and the results at finite N ” must be removed.
4. The second to last sentence in section 4.2, “Note, however, that our results (4.16). . .” must be removed.
5. The last paragraph in section 7, “Before ending this section, . . .” must be removed.
6. The last sentence in the first paragraph in section 8, “As a byproduct. . .” must be removed.

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References

- [1] S. Giombi and S. Komatsu, *More exact results in the Wilson loop defect CFT: bulk-defect OPE, nonplanar corrections and quantum spectral curve*, [arXiv:1811.02369](https://arxiv.org/abs/1811.02369).