ERRATA FOR "THE CRITICAL GROUPS OF ADINKRAS UP TO 2-RANK OF CAYLEY GRAPHS"

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Abstract. A gap in "*The Critical Groups of Adinkras Up to 2-Rank of Cayley Graphs*" by the author is corrected (which does not affect the main result).

A key step in the proof of the main result (Theorem 1.2) of [1] is to construct $\#V/2$ elements $g_1, \dots, g_{\#V/2}$ of the critical group that are "orthonormal" with respect to the monodromy pairing. The strategy in [1] is to fix an arbitrary color, and consider the elements $[\mathbf{e}_u - \epsilon \mathbf{e}_v]$'s produced by the edges uv's of that color, where ϵ is the sign of the edge. [1, Proposition 3.2] claims that such a collection of elements is indeed orthonormal regardless of the signature. However, its proof starts with performing vertex switchings so the edges are positive, before computing their pairing.

The referee correctly pointed out that while the calculation under such an assumption is correct, it is not verified in the proof that the switchings do not change the output. Instead, since the monochromatic set of edges is a perfect matching, one can perform vertex switchings (which do not change the critical group) in advance to make them all positive. Only then one applies Proposition 3.2 with the adequate assumption that the edges are positive, and the rest of the proof proceeds as the current version.

I would like to thank the anonymous referee again for this.

"Technical" Background: The (then?) IT policy of UiO creates a period between the departure of a member and the defunct of the member's email when the account can only be accessed on campus, while senders do not receive any error messages.

The editor of E-JC sent the acceptance letter and the final round of referee feedback to my UiO email address during that period (before I updated E-JC my contact). However, I noticed the acceptance status on E-JC's portal and submitted the final version right away assuming no amendment was needed. I only managed to read the feedback after I requested the archive of emails from UiO afterward, when it was already too late to make any changes.

References

[1] Chi Ho Yuen. The critical groups of Adinkras up to 2-rank of Cayley graphs, 2023. *Electron. J. Combin.* **31** (2024), no. 1, Paper No. 1.38, 9 pp.

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