Second-round review for
"Clustering of Diverse Multiplex Networks"

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It is acknowledged that the authors reply to all the comments from reviewers. However, there are still some worry in novelty and ambiguity in critical theoretical results after revision. Hence, I would keep the original attitude to this paper.

- (Novelty) Though the DIMPLE setting might be new, the between-layer clustering based on the network community membership is not new ((Stanley et al., 2016)). The new proof also relies on standard spectral analysis and k-means results in Lei and Lin (2022). Therefore, there are still worries for the lack of novelty.
- (Error bound) The between-layer and within-layer error bounds in Theorem 1 and 2 remain counter-intuitive in the number of layers L. The between-layer error in new equation (34) keeps the same when L increases and right hand side of within-layer error in new equation (35) is independent with L. The bounds (34) (35) contradict to the intuition that clustering performs better with more samples. In fact, authors hide the term L in the statement by assuming $L \leq n^{\tau_0}$, and the proofs indicate the same results before revision. The relationship between parameters, mentioned in authors' response for Question 2, does not explain the error bound sub-optimality in L compared with reference Lei and Lin (2022). In addition, it should be "the term $\mathcal{O}\left(\frac{1}{L+n}\right)$ may not be **large** enough ..." based on current results, and it is critical to explain the necessity of union bound.
- (Organization) The organization of the revised paper still can be improved. The numerical comparison in Section 2.3 should be moved to Section 4, and the simulation results can be shown in a more compact way. Also, it is worthwhile to add more discussions about the rank of $\mathbf{\Theta}$ and K-means on $\hat{\boldsymbol{W}}$ to avoid future confusion.

References

Lei, J. and Lin, K. Z. (2022). Bias-adjusted spectral clustering in multi-layer stochastic block models. *Journal of the American Statistical Association*, pages 1–13.

Stanley, N., Shai, S., Taylor, D., and Mucha, P. J. (2016). Clustering network layers with the strata multilayer stochastic block model. *IEEE transactions on network science and engineering*, 3(2):95–105.