In the paper arXiv:2311.07367 submitted to SciPost, the authors, H. Erbin and S. Majumder, deals with the construction of the interaction vertices in bosonic closed string field theory. Specifically, they deal with the construction of the quartic vertex at tree level. Their approach to use local coordinates that transform under $\mathrm{SL}(2,\mathbf{C})$. The most studied approach to these vertices uses the coordinates related to the minimal area metric associated with quadratic differentials. Perhaps due to an oversight, the authors did not quote one of the pioneering papers in this area, namely the paper by M. Saadi & B. Zwiebach, *Closed string field theory from polyhedra*, Annals of Physics 192, 213–227 (1989).

The authors succeeded to an extent in that they determine a one-parameter family of vertices, for which they obtain analytic expressions for the boundaries and volumes of the regions of the 4-point amplitude obtained by the cubic vertex and propagators using Feynman rules. Consequently they determined the region in the moduli space of the 4-punctured sphere that corresponds to the quartic vertex, parametrized its boundary and computed its volume. They have claimed this to be the main advantage of using these coordinates over other choices, in particular, the minimal area metric. An explicit expression of the local coordinates at each puncture, however, remains undetermined.

The same approach has been advocated for other vertices, even beyond the tree level. The results presented are no doubt of interest and may help with computations in string field theory. In fact, they authors mentioned the problem of mass renormalization at one loop, although the complexity involved in that is expected to be much higher.

Therefore, I think that the results deserve to be published. However, I cannot recommend publication in its present form.

The present version of the paper may be understandable only by experts in string field theory, which, in spite of its recent resurgence, remains somewhat of a niche subject. It will be in the authors' interest to make their results accessible to a broader audience of string theorists. Perhaps even beyond, since many quantum field theorists are working to understand the space of (effective) field theories, where some of the recent developments seems rather suggestive of structures seen in SFT.

In particular, my suggestion is to relegate detailed technical calculations to appendices and explain the background and approach in more details. Sections 3 and 4, which form the main body of the paper, consist of a

succession of formulas with very little to motivate a non-SFT reader going. The notation, loaded with subscripts and superscripts are cumbersome and difficult to read and keep track of. Admittedly some of it is unavoidable, however, some improvement may not be difficult to achieve.

A few other points:

Eq.(3.58) shows that there is a value of β for which the $\mathrm{Vol}(\mathcal{V}_{0,4})$ vanishes. This is however, less than the lower bound allowed for β. An elaboration of this for those not initiated in SFT may be useful. The authors may want to identify more such points and provide explanation.

In Eq.(2.1) (and similarly elsewhere) it is presumably meant that the global coordinate z is restricted to the local patch, for this equation to make sense.

The measure used to compute the volume of the regions of the moduli space may be mentioned.

Finally, the presentation may benefit from a stricter editing by the authors. For example, in the opening sentence of Subsec. 2.1, "*At tree level, Riemann surfaces are n-punctured sphere*", the phrase *Riemann surfaces* should be replaced *string worldsheets* (and *sphere* by *spheres*). Likewise, it is not clear what the *This* refers to in the first sentence of Subsec. 3.1.