RESPONSE TO REPORT 1

January 2024

- I would request that the authors dedicate more space and effort into hashing out the differences between their paper and their Ref. [46]. I think that the phrase "significant overlap" is insufficient here. For example, reference could be made to the derivative counting used in the main text, which is the same as (or taken from?) [46], versus that in Appendix C. Also, obviously, since [46] has come out already, the bibliographic reference should be updated.

⇒ We note that we had already made reference in page 4 to the derivative counting scheme proposed in [46] (which is [48] in the new version). However, we have now in addition elaborated on the overlap and the differences between these two jointly submitted papers at the end of the introduction in Section 1. We have also updated the references to reflect that [46] has appeared.

- Cite "Efficiently preparing Schrodinger's cat, fractons and non-Abelian topological order in quantum devices" by Ruben Verresen, Nathanan Tantivasadakarn, and Ashvin Vishwanath https://arxiv.org/abs/2112.03061 in addition to [10] for examples of testing fractons using ultracold atoms. In this case, we're talking about Rydberg atom arrays.

⇒ We have included this as reference [11].

- Cite "Hyperbolic Fracton Model, Subsystem Symmetry, and Holography" by Han Yan https://arxiv.org/abs/1807.05942 in addition to [11] for examples of fractons in holography.

⇒ We have included this as reference [12].

- I think these are typos (math typos here; I'm not going to correct grammar or spelling): right before eq. (2.28), F should be $\mathscr{F}$ and in eq. (2.30), I think the left hand side should be $\tilde{A}^a_\mu e_{\nu a} - \tilde{A}^a_\nu e_{\mu a}$.

⇒ We thank the referee for pointing out these typos. They have been fixed in the revised manuscript.