

## I. REPLY TO REFEREE 1

We thank you for evaluating our manuscript, which we believe now meets the *SciPost Physics* criteria. Below, we address your concerns.

1. **Referee 1:** *The paper has an “outlook” section, but no “conclusion” section where the results are summarised. Such a conclusion section is required by SciPost Physics general acceptance criterion 4.*

**Response:** Now we have added the conclusion into the last section “Conclusion and Outlook”.

2. **Referee 1:** *There are occasional errors in the grammar, e.g. “topological protected” on page 7.*

**Response:** We have corrected the errors and typos in the manuscript shown with colored words.

3. **Referee 1:** *The abbreviative convention in which a second sentence is included in parentheses within a first, rather than written separately, is overused, sometimes to the point of impairing meaning. See, for example, “ $q_{\alpha(\beta)}^1 < q_{\alpha(\beta)}^2$ , leading to elongated trajectories in the  $y$ -direction ( $x$ -direction) for the  $\alpha$  ( $\beta$ ) modes” on page 7. This technique makes things easier for the writer, but harder for the reader; I recommend avoiding its use altogether.*

**Response:** The original idea was to use this abbreviative convention to prevent the redundancy. Following your suggestion, now we have significantly reduced the use of this form as much as we can for easier reading. Some of the sentences are rewritten.