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Uncertainty relations based on state-dependent norm of commutator

Referee report

The authors made some amendments to the remarks that I have found confusing in the original version. I also understand the arguments of the authors written in their response, though I am still not entirely convinced that the paper is ready to be published.

As I already wrote in the previous report, the paper does contain interesting insights. The results show that investigating the uncertainty relations in terms of the state-dependent Frobenius norm might be fruitful, and thus have an impact to the field. I also admit that the approach of the authors to comparing different uncertainty relations is new, to my knowledge.

In fact, if the authors proved that their conjectured, and seemingly more interesting, new uncertainty relation holds, I would not have hesitated. But "strong numerical evidence" is not the same thing as a proof.