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The Editors, Physical Review Letters APS

Dear Editor,

We would like to thank the referees for taking the time to review our manuscript entitled "Inverse energy transfer in three-dimensional quantum vortex flows". We have addressed all of the comments of the referees.

For Referee A, we have added further details in the manuscript to address the major concerns, particularly regarding the conservation and symmetry of the normal fluid helicity, and the relevance of Kelvin waves in the creation of unbalanced chiral modes.

For Referee B, we believe that the referee has missed the main focus of the paper, which was to provide an explanation of the inverse energy transfer due to vortex reconnections in terms of a chiral imbalance of helical modes, and not to explain [Krstulovic&Polanco PRL 2020], of which Krstulovic is a collaborator and co-author of this work. The paper by Krstulovic&Polanco, fundamentally differs from ours in terms of the model used and the analysis, and we cite this work at the very end of our manuscript as a possible connection, and not as an explanation as the referees comments seem to suggest. We hope that we have made our comments sufficiently clear to the referee for the relevance of our work.

On behalf of the authors,

Piotr Stasiak