

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.

Regarding Referee A, we have added further details in the manuscript to address in detail 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.

Regarding Referee B, we believe that the referee has missed the main focus of the paper, which was to report an inverse energy transfer and provide an explanation in terms of vortex reconnections triggering a chiral imbalance of helical modes, and not to explain the article Krstulovic&Polanco PRL 2020 (that one of us co-authors). We cite this work only in the very last paragraph of our Letter to establish a possible connection and to describe a physical setting where the new physical phenomena described in our manuscript could be relevant; our findings are not at all an explanation of it. The paper by Krstulovic&Polanco, fundamentally differs from ours in terms of the model used and the analysis. We hope that the main aim of the paper is now clear to the referee and we hope that they can see the relevance of our work.

Piotr Stasiak
Andrew Baggaley
Carlo Barenghi
Giorgio Krstulovic
Luca Galantucci