Spatial and temporal variability of mode-1 and mode-2 internal solitary waves from MODIS/TERRA sun glint off the Amazon shelf.

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We thank the reviewer for taking the time to review our manuscript and especially for the important remark regarding the values of the diffusivities. In the following, our response to the reviewer's comment is in bold black color.

The authors have addressed most of my comments and I think the paper is suitable for publication. My only remark concerns the values of the diffusivities, I think molecular diffusivities are not appropriate for geophysical flow it is really nearly equivalent to consider an inviscid flow. So putting such a low diffusivity does not really make sense it would be more straightforward to state that they consider inviscid solutions of the TG solution. If they really want to get an estimate of the diffusivities impact on TG solution they should consider eddy diffusivities which will be orders of magnitude larger.

ANSWER:

The authors agree with the reviewer's comment. We changed the manuscript to state that we have considered inviscid solutions of the TGE. The appendix containing the method to solve the viscous TGE was excluded and all important information about the TGE is summarized in section 2.3: Theoretical calculation of IT velocities.