

Second referee report SciPost Physics on: “Beyond Gross-Pitaevskii equation for 1D gas: quasiparticles and solitons” by Jakub Kopycinski, Maciej Lebek, Maciej Marciniak, Rafal Oldziejewski, Wojciech Gorecki, Krzysztof Pawlowski.

As I mentioned in my original report I find the present work an interesting attempt towards setting up beyond mean-field models so as to deepen our understanding of many-body effects. Additionally, I find that the resubmitted manuscript has been improved since the authors have tried to the best of their ability to address most of the comments raised. Particularly, most of the essential points of my original report have been adequately addressed both within the manuscript as well as in the referee report. For instance, further explanations on limiting cases along with their physical interpretation, such as the pressure term, are now provided within the text. Moreover, more references have been included in the updated version and several typos have been corrected.

I find that the revised manuscript is now elevated and can be accessed by a broader audience. Due to the aforementioned reasons, I can now recommend the revised manuscript as suitable for publication in SciPost Physics.