Review of: "A memory dependent analysis on permeation of non-Gaussian laser pulse through human skin"

Aloisi Somer[1]

1 Universidade Estadual de Ponta Grossa

Potential competing interests: No potential competing interests to declare.

The paper presents a comprehensive investigation of thermodynamic aspects related to laser treatment on human skin, employing a memory-dependent hyperbolic-type thermoelastic heat conduction model. The problem is intriguing, representing high-level research, and the results are significant; however, the paper requires the following points to be addressed:

1 - The original abstract, while informative, could benefit from improved clarity and readability;
2 - The references are not in numerical order. For example, the first reference that appears in the text is numbered [15].
3 - The presentation of the results would benefit from enhancement. Specifically, it is advisable to improve the clarity of Figures 3 and 4 by including clear y-axis labels and units for better comprehensibility.
4 - The discussion is characterized by concise but shallow statements. To enhance the depth of the discussion, it would be valuable to conduct a comparative analysis with results from both theoretical and experimental studies, providing a comprehensive understanding of how the presented model contributes to the broader field of study.
5 - While the article's objective is intriguing, the conclusions appear to deviate from it. A more comprehensive examination of the impacts of memory on the analyzed parameters is warranted. This is especially underscored in point 1, where it is stated that 'A good agreement is found with optical analysis.' However, the absence of experimental results from optical analysis, as well as a comparison with existing studies, makes it challenging to support this assertion effectively."

Overall, it is essential to articulate more clearly the novelty of the findings and their significance within the context of the study area.