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| Book Name: | [**Physical Science: New Insights and Developments**](https://bookstore.bookpi.org/product/physical-science-new-insights-and-developments-vol-1/) |
| Manuscript Number: | **Ms\_BPR\_6014** |
| Title of the Manuscript:  | **Symmetry Breaking Model of Volume Pulsating Walking Droplets** |
| Type of the Article | **Book Chapter** |

**Special note:**

**A research paper already published in a journal can be published as a Book Chapter in an expanded form with proper copyright approval.**

**Source Article:**

**This chapter is an extended version of the article published by the same author(s) in the following journal.**

**PROGRESS IN PHYSICS, 16(2): 102-105, 2020.**

**Available:** [**https://www.progress-in-physics.com/2020/PP-60-05.PDF**](https://www.progress-in-physics.com/2020/PP-60-05.PDF)

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| PART 1: Comments |
|  | Reviewer’s comment**Artificial Intelligence (AI) generated or assisted review comments are strictly prohibited during peer review.** | Author’s Feedback *(Please correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)* |
| **Please write a few sentences regarding the importance of this manuscript for the scientific community. A minimum of 3-4 sentences may be required for this part.** | **Droplets and the processes that create them are complex phenomena. This complexity can be discussed and studied from various physical and chemical aspects, and due to the importance of this phenomenon and its application in various industries, it has always been of interest to researchers. The present study can also be considered in this regard and it is a discusses the classical study of hydrodynamical Faraday waves and introduces new hypotheses about the dynamics of droplets.**  |  |
| **Is the title of the article suitable?****(If not please suggest an alternative title)** | **Yes** |  |
| Is the abstract of the article comprehensive? Do you suggest the addition (or deletion) of some points in this section? Please write your suggestions here. | **Yes, but paying attention to the comments attached below can improve it.** |  |
| **Is the manuscript scientifically, correct? Please write here.**  | **Yes, but paying attention to the comments attached below can improve it.** |  |
| **Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.****-** | **Yes, but paying attention to the comments attached below can improve it.** |  |
| Is the language/English quality of the article suitable for scholarly communications? | **Yes, but paying attention to the comments attached below can improve it.** |  |
| Optional/General comments | **Scientific Perspective:**1. **Relevance of Concepts**: The article discusses the classical study of hydrodynamical Faraday waves and introduces new hypotheses about the dynamics of droplets. However, it would benefit from a clearer connection to existing literature. Citing more recent studies could strengthen the argument for the proposed missing elements in the current research.
2. **Clarity of Propositions**: The text introduces complex ideas such as volume pulsations and bath deformation but does not adequately explain these concepts for readers unfamiliar with the topic. Consider adding definitions or brief explanations of key terms.
3. **Empirical Support**: When proposing new hypotheses, it would be helpful to reference experimental data or case studies that support the claims. This could enhance the credibility of the arguments made regarding the droplet dynamics.
4. **Modeling Advances**: The critique of the current models (Bush-Molacek and Oza) is valuable, yet the article could elaborate on how the proposed model would improve upon existing frameworks. Specific examples of how the new model could be applied or tested would be beneficial.

**Writing Perspective:**1. **Structure and Flow**: The article has a logical progression, but transitions between sections can be improved. Consider using clearer signposting to guide readers through the argument. For instance, introductory sentences at the beginning of each section can help contextualize the upcoming content.
2. **Conciseness**: Some sentences are lengthy and complex, which may hinder comprehension. Aim for more concise statements without losing the depth of information. For example, breaking down longer sentences into shorter, more digestible ones can aid clarity.
3. **Technical Jargon**: While specialized language may be necessary for a scientific audience, it’s important to balance this with accessibility. Consider minimizing jargon or providing explanations for less common terms to make the work more approachable.
4. **References and Citations**: Ensure all references are properly cited and formatted consistently. This not only strengthens the article’s academic rigor but also allows readers to explore the source material easily.
5. **Conclusion and Implications**: The article ends somewhat abruptly. A concluding section summarizing the main findings and discussing their implications for future research would provide a stronger closure and enhance the overall impact of the work.

**Additional Comments:*** Including visuals such as diagrams or charts could help illustrate complex concepts and models, making the content more engaging and easier to understand.
* A brief discussion on the practical applications of the research could motivate interest and relevance, especially if the findings could impact fields beyond theoretical physics.

By addressing these points, the Book Chapter could significantly enhance its scientific rigor and overall readability. |  |

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| **PART 2:**  |
|  | **Reviewer’s comment** | **Author’s comment** *(if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)* |
| **Are there ethical issues in this manuscript?**  | *(If yes, Kindly please write down the ethical issues here in details)* |  |

**Reviewer details:**

**Ali Kamranpey, Iran**