

Review Form 3

Journal Name:	Asian Journal of Research and Reviews in Physics
Manuscript Number:	Ms_AJR2P_129452
Title of the Manuscript:	Desirability of Reduced mass Concept, Conflicting CODATA Values of some Constants: Variants of Fine structure constant and Rydberg constant Equations
Type of the Article	

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PART 1: Comments

Review of the Article «Desirability of Reduced mass Concept, Conflicting CODATA Values of some Constants: Variants of Fine structure constant and Rydberg constant Equations».	Reviewer's comment	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.	The article focuses on the analysis of the concept of effective mass in the context of particle physics, as well as its impact on the values of the Rydberg constant and the fine-structure constant. The author raises important questions about the contradictory results obtained using various approaches to defining mass and proposes new equations for these physical constants. The work addresses pressing issues in physics, making it interesting for specialists in the field.	
Is the title of the article suitable? (If not please suggest an alternative title)	Yes. The topic is suitable.	
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.	The abstract of the article is brief, sufficient for a first acquaintance.	
Is the manuscript scientifically, correct? Please write here.	The author refers to the works of other researchers and gives examples that support his arguments. However, it would be useful to discuss in more detail the methodology used to derive the new equations, as well as to explain exactly how the reduced mass affects the results of the calculations. This would help the reader to better understand the scientific value of the data presented.	
Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.	Yes. The list of references is sufficient, in accordance with the requirements of a scientific article.	
Is the language/English quality of the article suitable for scholarly communications?	Yes, it does.	

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<p>Optional/General comments</p>	<p>Topic and Content</p> <p>The article focuses on the analysis of the concept of effective mass in the context of particle physics, as well as its impact on the values of the Rydberg constant and the fine-structure constant. The author raises important questions about the contradictory results obtained using various approaches to defining mass and proposes new equations for these physical constants. The work addresses pressing issues in physics, making it interesting for specialists in the field.</p> <p>Structure and Clarity of Presentation</p> <p>The article has a clear structure: an abstract, introduction, and main content. However, the introduction appears somewhat overloaded with terminology and references, which may hinder the reader's understanding of the main idea. It is recommended to articulate key points more clearly and avoid excessive complexity in the presentation.</p> <p>Scientific Rigor</p> <p>The author references works by other researchers, such as Barbosa, and provides examples that support his arguments. However, it would be beneficial to discuss in more detail the methodology used to derive the new equations, as well as to explain how effective mass influences the results of calculations. This would help readers better appreciate the scientific value of the presented data.</p> <p>Contradictory CODATA Values</p> <p>The discussion of contradictory CODATA values is an important aspect of the article. The author mentions ranges of values for the Rydberg constant and the fine-structure constant but does not provide sufficient explanations for the reasons behind these discrepancies. Adding an analysis of these differences and possible ways to resolve them would make the work more substantive.</p> <p>Keywords and Classification Numbers</p> <p>The keywords and classification numbers accurately reflect the main topics of the article. However, it may be worth considering the addition of extra keywords such as "quantum mechanics" or "spectroscopy" to broaden the thematic coverage.</p> <p>Conclusion</p> <p>Overall, the article raises significant questions in the field of physics and offers new perspectives on the use of the concept of effective mass. However, there is a need to improve clarity in presentation and deepen the scientific analysis of the data presented. Future research in this area may yield substantial results and help resolve current contradictions. It is recommended to revise the article with a focus on methodology and justification of conclusions.</p>
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PART 2:

	<u>Reviewer's comment</u>	<u>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)</u>
<u>Are there ethical issues in this manuscript?</u>	<u>(If yes, Kindly please write down the ethical issues here in details)</u>	

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