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| Journal Name: | [**International Astronomy and Astrophysics Research Journal**](https://journaliaarj.com/index.php/IAARJ) |
| Manuscript Number: | **Ms\_IAARJ\_133326** |
| Title of the Manuscript:  | **Variable Stars and Their Implications for Stellar Astrophysics** |
| Type of the Article |  |

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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.** | **If the paper in this stage is published, then not. I appreciate the initiative. The abstract mentions that the study of variable stars will influence health care. Major changes have to be brought about in this review article to publish it. The references that are mentioned should be thoroughly studied and a rigorous comparison of studies must be made.** |  |
| **Is the title of the article suitable?****(If not please suggest an alternative title)** | **Yes, provided there are more information explained.** |  |
| 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. | **Key words should be in order. There are few other essential key words than the ones mentioned in the manuscript.****The abstract promises explanation on various topics, which the writer fails to provide as the article moves on.** |  |
| Is the manuscript scientifically, correct? Please write here. | There should be more scientific data and facts included. |  |
| **Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.** | Yes |  |
| Is the language/English quality of the article suitable for scholarly communications? | Yes |  |
| Optional/General comments | **Include more sub-headings to the paragraph named ‘Variable stars’ to increase the significance.****Can Table 1 include more recent stars? Also, instead of naming the 1st coloumn as “Type”, it should be renamed as ‘Class of variable star’.****Methodology only describes on how this manuscript will be beneficial to the scientific community. However, it does not elucidate on the main methods that are used to observe the stars or reduce the data and finally analyse them.****Table 3 discusses the different methods used to observe the variable stars. These methods should be discussed in detail in the manuscript along with a brief description on the instrument setting. If possible diagrams should also be provided. Moreover, there is no explanation given on what techniques were used after the observation and how the data was analysed.****Results section has something mentioned as ‘period-L-M’. Abbreviations can only be used after the full forms have been mentioned previously.****The author is obsessed with how this work can bring about great discoveries but fails to provide sufficient data, diagrams, graphs, explanations on how the process was carried out. Moreover, a detailed Result section is needed to enlighten its readers pulsation mechanisms and energy transfer processes which was mentioned in the abstract.** **More relevant diagrams and graphs should be made.** |  |

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| **PART 2:**  |
|  | Reviewer’s comment | Author’s comment *(if agreed with the 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 detail)*No |  |

**Reviewer details:**

**Koena Maji, TATA Institute of Fundamental Research, India**