

Review Form 3

Journal Name:	International Astronomy and Astrophysics Research Journal
Manuscript Number:	Ms_IAARJ_129279
Title of the Manuscript:	Resolving the Hubble tension with a Late Dark Energy Modification to the Λ CDM Model
Type of the Article	Original Research Article

General guidelines for the Peer Review process:

This journal's peer review policy states that **NO** manuscript should be rejected only on the basis of '**lack of Novelty**', provided the manuscript is scientifically robust and technically sound. To know the complete guidelines for the Peer Review process, reviewers are requested to visit this link:

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PART 1: Comments

	Reviewer's comment	Author's Feedback <i>(Please correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)</i>
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.	This text provides details on the study of Hubble tension and modifications to the Λ CDM model. The study explores the effect of dark energy within gravitationally bound structures on the expansion of the universe and proposes a new Λ fCDM model to resolve the Hubble tension. Through numerical integration of the model and parameter adjustments, the authors show how the new model performs in late and early universe observational data, especially in terms of matching the Hubble parameter H_0 . This is a carefully thought-out and analyzed work that proposes and verifies a new idea for studying the universe.	
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.	
Is the manuscript scientifically, correct? Please write here.	Correct.	
Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.	Yes.	

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Is the language/English quality of the article suitable for scholarly communications?	Yes.	
Optional/General comments	<p>The key points of this study include:</p> <ol style="list-style-type: none"> 1. Proposing the AfCDM model, assuming that dark energy inside gravitational bound structures has no significant effect on spatial expansion. 2. Demonstrating the effectiveness of the new model in addressing the Hubble tension through numerical simulations and parameter matching. 3. Comparing the performance of the AfCDM model with the ΛCDM67 and ΛCDM73 models in late and early universe observational data. 4. Suggesting that the assumption of dark energy within gravitational bound structures affecting cosmic expansion may help explain some contradictions in cosmological data. <p>This study presents an intriguing new model for addressing the Hubble tension and showcases the potential of the model through numerical simulations and observational data matching. However, the study did not consider the speed of gravity. According to general relativity, the speed of gravity is equal to the speed of light, which is very slow on cosmic scales. Ignoring this detail implies accepting that the speed of gravity is very high, falling within the realm of Newtonian gravity theory. General relativity is the mainstream theory of gravity, yet this study still relies on the proven incorrect Newtonian gravity theory, which challenges and disrespects general relativity. Without considering the impact of the slow speed of gravity, this paper moves away from general relativity. With positive adjustments, it could be accepted.</p>	

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?	<i>(If yes, Kindly please write down the ethical issues here in details)</i>	

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