



PaperId : ICAST25-164-172
Track : Track7
Title : Asteroseismology: AI-Driven Seismic Event Detection for Extra-Terrestrial Missions

Reviewer 1 Comments		
Sr #	Title	Comments
1.	Technical Soundness & Methodology	The paper has described an AI-enhanced framework to optimize seismic event detection for space missions. Proper framework has been proposed for event detection, starting with pre-processing and followed by CNN to perform the final classification of true seismic events.
2.	Quality of Results & Analysis	Preprocessing results have been presented but the major classification results are not reported properly. It is suggested to elaborate the quantitative as well as visual results.
3.	Originality & Novelty	The paper presents a novel approach to detect seismic events and it will be definitely an innovative contribution.
4.	Relevance & Timeliness	The topic is mainly focusing on Asteroseismology, which is quite relevant to the conference.
5.	Contribution & Impact	The geological activity (e.g., marsquakes, moonquakes) is crucial for planetary science and the safety of future missions. This research will help to characterize internal planetary structures, monitoring tectonic activity, and detecting impacts (meteorites, landslides, etc.).
6.	Clarity & Organization	Paper has well defined sections.
7.	Language, Grammar & Presentation	Paper has been written in clear English but grammatical errors need correction. Figures and Tables are clear and labelled properly.
8.	Reference Quality & Related Work	References have been cited properly and existing literature relevant to the problem under study is discussed in detail.

Reviewer 2 Comments		
Sr #	Title	Comments
1.	Technical Soundness & Methodology	Yes.
2.	Quality of Results & Analysis	There is lack of comparision.
3.	Originality & Novelty	The Novelty will claim when there is comparision with the existing data.
4.	Relevance & Timeliness	yes
5.	Contribution & Impact	yes
6.	Clarity & Organization	The manuscript lacks consistency. There are a lot of typo mistakes in the manuscript. The references are not consistently cited. Furthermore, I couldn't see any statistical analysis in the paper. The author should mention the uncertainty with the existing data
7.	Language, Grammar & Presentation	Yes, the paper is written clear but the typo and other consistency should address in the revised version.
8.	Reference Quality & Related Work	The authors should improve the reference quality.

Best Regards

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