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| Book Name: | **Proceedings of the 8th International Conference on Solidification and Gravity** |
| Manuscript Number: | **Ms\_BPR\_** **3590.10** |
| Title of the Manuscript: | **Utilization and Payload Operations onboard the Starlab Commercial Space Station** |
| Type of the Article | **BOOK CHAPTER** |

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| PART 1: Comments | | |
|  | 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.** | This manuscript is valuable to the scientific community as it presents Starlab’s innovative approach to replacing the ISS and advancing low-earth orbit utilization. It emphasizes modular design and customer-centric operations to streamline research and enhance efficiency. This work supports broader access to space for diverse scientific and commercial purposes, shaping the future of sustainable space exploration. |  |
| **Is the title of the article suitable?**  **(If not please suggest an alternative title)** | **"Starlab: Revolutionizing Payload Integration and Utilization in Commercial Space Stations"** |  |
| 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. | Efficient commercial space infrastructure design is critical for sustainable space exploration and its benefits for life on Earth. This paper explores the utilization and payload operation strategies of the Starlab commercial space station, developed in collaboration with NASA’s Commercial LEO Destinations Program. Starlab’s innovative modular architecture and customer-focused operational model aim to streamline payload integration, foster international collaboration, and accelerate research turnover. Key features, such as end-to-end mission support and flexible laboratory configurations, position Starlab as a cornerstone for post-ISS low-earth orbit research and commercial activities. By addressing challenges in accessibility, adaptability, and scalability, Starlab sets a new benchmark for private and governmental space exploration efforts. |  |
| **Is the manuscript scientifically, correct? Please write here.** | * Some statements, like Starlab's ability to "revolutionize" LEO research, lack specific quantitative or comparative data to substantiate the claim. * The manuscript notes that some data (e.g., design features) have evolved since the conference, which may lead to discrepancies if not clarified. |  |
| **Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.**  **-** | The references provided in the manuscript are relevant and drawn from credible sources, including peer-reviewed articles, conference papers, and NASA documentation. |  |
| Is the language/English quality of the article suitable for scholarly communications? | The language quality of the manuscript is generally suitable for scholarly communication, as it employs formal and technical terminology appropriate for the subject matter. |  |
| Optional/General comments | Inappropriate structure, lack of research background, lack of comparison with similar research, lack of conclusions |  |

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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)* |  |

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| **Reviewer Details:** | |
| Name: | **Amirhossein Javaherikhah** |
| Department, University & Country | **Universidad Politecnica de Madrid, Spain** |