

Assignment: TARMBJ-10

This report summarizes the overall quality of your edited manuscript. For each section, we provide specific comments on the quality and these are substantiated by examples (where available)

Structure Review

Overall manuscript

- > The author does not need to make major changes as the overall paper follows a logical order.

 Comment: We have suggested some relatively minor changes, but no major changes are required.
- > The paper is written in line with the intended audience.

Title & Abstract

- Also, it has been checked carefully to ensure that it clearly conveys the aim of the study.
- ➤ In the abstract, purpose, methods and materials, results, and conclusions are appropriately stated.
- The abstract of this study is appropriate and follows a logical structure.
- ➤ The title is sufficiently informative and concise.

Introduction

- In the Introduction, the scope of the investigation is indicated
- > Statements clarifying the purpose and approach of the study are included in the Introduction.
- > The introduction clearly states relevance of the findings.
- ➤ The limits of the problem and investigation are stated appropriately.

Materials and Methods

- > Statements describing measurement parameters such as sensitivity and accuracy are clear and accurate.
- > The statistical significance is evaluated appropriately. The data is statistically significant and the samples are truly randomized.
 - Comment: The authors have conducted careful statistical correlations between the stellar metallicities listed in the two catalogs they used. They also performed detailed statistical tests of the distributions of planetary masses and semi-major axes (Figs. 3 and 4)
- ➤ The methodology is described appropriately and can be reproduced by another investigator.

 Comment: We did not fully understand what the authors mean by the "metal-poor" and "metal-rich" selection effects (Fig. 1). However, we think that another researcher who is expert in this are would be able to reproduce what the authors have done.



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Results

- The result section contains only results; no discussion is presented in this section.
- > All the presented data is relevant to the thesis.
- > The key results presented in tables and figures are summarized appropriately in the text.

 Comment: The results presented in the figures are well-summarized in the text.
- The results are stated correctly in only the Results section.

Discussion

- ➤ The content presented in the Discussion section is appropriate and does not repeat information from the Results section.
- ➤ There are no generalizations beyond the findings of this investigation.

 Comment: The authors have documented their conclusions carefully.
- > The conclusions are clear.
- > The discussion is of appropriate length.
- ➤ Some of the discussion regarding the key results supporting the main hypothesis was not convincing. Please check the remarks file for more details.

Comment: The authors make a good case that there are three types of substellar objects and that the masses (4 M_J and 20 M_J) that separate them are physically significant. However, some of the discussion was not convincing (the beginning of sec. 4.2 and the absence of lighter planets in sec. 4.3); we have included remarks in the edited file.

Peripheral Text Review

Figures and/or Tables

- > Every figure and/or table can stand alone without reference to the main text.
- ➤ The Figures and Tables complement the main text, without any discrepancy.
- ➤ The legends are complete and accurate.

 Comment: We have edited all of the figure captions to increase clarity.
- > They are cited in the main text at appropriate places.



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Bibliography

- ➤ All references cited follow a consistent format.
- ➤ All statements of fact are appropriately referenced.
- > The literature cited is very pertinent to the investigation.

Content, Terminology, Style, and Format Review

Content

- > There are no gaps in content in this paper.
 - Comment: We did not understand precisely how the authors produced their "common-biased samples." However, we think they have summarized their procedures as well as possible.
- ➤ Where applicable, the necessary information has been added.

 Comment: We have inserted a number of comments in the edited text to call attention to points we found unclear.

Terminology

- > The scientific nomenclature (gene names, protein names) is in order throughout the text.
- > The scientific terminology and representation in the paper are appropriate and consistent.
- > The terms used in the paper are valid in the field.

Style

The capitalization/italicization/number style follows conventions of the subject area.