REVIEWS ON THE MANUSCRIPT [1]

Reviewer 1:

Comments:

The article focuses on the experimental analysis of a single, chosen approach. The article provides the definitions of the terms associated with the problem (e.g. efficiency). The task was analyzed only qualitatively (the conclusions from the measurements are not transformed into quantitative results for the efficiency). The analysis of the aerodynamics of the model is provided and is an advantage of the solution.

The strongest and the weakest aspect of the paper:

The strongest aspect of the paper is the detailed experimental analysis of many designs (aerodynamical properties, nozzle shapes, balloon properties).

The weakest aspect of the paper is that efficiency was not calculated for any case. The theoretical part is only a small part of the solution. Also, the language is sometimes unclear.

Organization and Presentation:

The paper has clear, easy-to-read structure; however, it lacks an abstract section at the beginning, and a section about limitations of the solution.

Style:

The article is sometimes hard to understand. The language is sometimes unclear and unspecific ("car will be adopted", "using an internal source" **of what?**). You should write shorter sentences, and try to use non-hermetic phrases, like "vehicle autonomy" or "the balloon nozzle is disposed".

Examples:

- car will be adopted as → car will be treated as;
- on the shape that the balloon nozzle is disposed → on the shape of the balloon nozzle
- parallelepiped → ?
- the larger the traveled by car → the larger the distance traveled by car

Additional Questions:

- How do you know that in the test with the straw, the flow "tends to be laminar"?
- What is the highest efficiency in your design of the car?
- Straw in the propeller – what does it mean?

References:

The number of used references is good. It is sometimes unclear if the reference is a book or journal (please add more information – year of publishing, journal name, volume, page numbers, publisher of the book etc.).

The references are properly and professionally mentioned throughout the text.

Recommendation:

- Change “the problem” section to “abstract”. Add to the abstract a few sentences describing your solution and summarizing briefly your results
- Revise the language, possibly with a technical dictionary/translator
- Attach a chapter with a discussion of limitations of your solution (descriptions of limitations is scattered through the article)
- Add a few sentences about the final efficiency of your design, the longest and the shortest distance etc.

Summary:

The manuscript is recommended for publication only after essential revisions.

Reviewer 2:

This paper has good structure.

I recommend this paper.

Editorial request:

Concept: It appears clear that the author considers only the cars where the deflating balloon provides propulsion (a *rocket-type* car.)

Please justify *why* this concept is considered and why any other possible approaches are not. This explanation would equally work as a necessary introduction for the readers into your approach.

References: Please check the references [4] and [5]. The reference [5] appears to be a journal article but this article cannot be found as almost no specific details are given (year, volume, pages, title of the paper.) The reference [4] is suspected to be a book. Consider making the reference more specific, at least with the details of the publisher.

Consistency of spelling: Please use a blank spacing between a numerical value and its dimension (0.05 cm, not 0.05cm).