

Interactive comment on “A low-cost autonomous rover for polar science” by Andrew O. Hoffman et al.

Anonymous Referee #1

Received and published: 24 January 2019

In this paper the authors provide the technical specifications and a feasibility study of a low-cost autonomous rover designed to operate in hostile environments. Also, the authors describe the performance of the proposed solution on real missions. The first part of the manuscript is quite detailed, but the discussion must be improved. I think that the manuscript can be considered for publication after major revisions as specified below:

- The paragraph Field performance (experiments) should be extracted from the Rover design section and integrated in an "Experiments and results" dedicated section. This new section should be expanded as specified in the next bullet point.
- A full comparison with at least two different solutions currently available should be given, as well as an analysis of possible upgrades/downgrades of the proposed solu-

tion, for example mounting different imaging sensors (less or more expensive).

- I believe the manuscript is quite unbalanced. I missed a more comprehensive discussion section. It is clear that the developed system is simpler and less expensive with respect to other commercially available products, but I think that the possible drawbacks of the solution should be highlighted as well. Also, examples of additional instruments that can be carried on the rover should be given. The implications of using the proposed solution instead of other commercially available ones need to be clarified and explicitly written.

- In the conclusions the authors write about future efforts for the integration of solar panels. This fact should be clearly addressed also in the discussion, for example highlighting the possible costs for specific add ons. In fact, the total cost of the rover can not be the same of the "base" model integrating other kind of instrumentation.

- A minor remark: please pay attention to section numbering (e.g. 2.2 field performance has the same number of the previous subsection) and

Interactive comment on Geosci. Instrum. Method. Data Syst. Discuss.,
<https://doi.org/10.5194/gi-2018-52>, 2019.

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Discussion paper

