

Review of: "Analytical Methods for Tracking Bodies Motions on the Lunar Surface in Apollo XVI Footage"

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Potential competing interests: No potential competing interests to declare.

This is a fine re-analysis of historic data that was apparently analysed in a rush back in the days. The Tracker (R) tool, which I know well, is an excellent choice!

I think the paper is well worth publishing after some moderate revisions have been made:

1. English language. I suggest a native speaker should go through the manuscript and simplify and rephrase some complicated sentences. And maybe rename Image to Figure in the captions.
2. Use a decimal point, not a decimal comma for all numbers.
3. In captions of figures, consistently provide the reference where this image was taken from (e.g., image 1, really figure 1: [from AGU Fall Meeting 2011]).
4. Figures 8-11: provide clear (large font) axes with labels and units and briefly explain what we see in the resp. figure.
5. Similarly, figure A6 has a barely legible origin, X,Y, At, Ac; point A: label and mark clearly with big font.
6. Various places: "geometric distortion", sometimes you call it aberration (but aberration is a misleading word, I believe). I don't understand how you treat it and how you correct (if at all) "raw" images. xy percent distortion? That doesn't tell me anything. Please revise. See literature for distortion correction, e.g., Strobl, K. H., W. Sepp, S. Fuchs, C. Paredes, M. Smisek and K. Arbter (2016) "DLR CalLab CalDe: The DLR Camera Calibration Toolbox. <http://www.dlr.de/rmc/rm/en/desktopdefault.aspx/tabid-3925>." or Alvarez, L., L. Gomez and J. R. Sendra (2010). "Algebraic lens distortion model estimation." Image Processing On Line 1.
7. The paper ends, somehow unceremoniously, after paragraph B.3.4.2.
I do miss a summary of results and a conclusion (what do we learn about lunar dust? About the data quality? What is the unsolved thing?).
8. A number of specific comments see annotated PDF of the manuscript (supplementary data, attached).