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Interactive comment

Interactive comment on "Precise DEM extraction from oblique imagery of Svalbard in 1936" *by* Luc Girod et al.

Anonymous Referee #2

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Structure from Motion photogrammetry offers today the possibility to process or re-process old images, obtaining new information about the past. This paper analyzes the challenge of using 1936 high oblique imagery to generate a DEM of Svalbard. These images have peculiarities that can make their processing more problematic compared to nadir images, as correctly illustrated by the authors in the introduction. In this light the work is particularly interesting. The text is easy to read and to follow, and the research is presented in an appropriate way.

I'm agree with Simon Buckley comment: the references must be expanded, adding more articles about "archive photogrammetry", even if in other fields of application. Moreover the abstract appears cut in the final part: a sentence about the "conclusion" of the work must be added.

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[Discussion paper]

Some questions and observations:

- Which software was used for processing? A commercial one or a software developed "in house" by the authors? It's not clear.

- What do the authors mean using the term "normalization"? In photogrammetry the collimation of fiducial marks is the phase of interior orientation; in this case study their positions are available? If not, how was the thing solved? This point must be better explained in paragraph 3.1.

- Paragraph 3.3: I understood that the camera calibration was performed processing 5 images and then extending the solved parameters to the other images...is it correct? Maybe this point must be better explained and some observations about the calculated parameters added.

- Figure 2: it is "mosaicking" I think...

- I didn't understand: in order to obtain the point cloud triplets of images have been processed; in the overlapping areas between a triplet and the next one the extracted points are consistent?

- Is it possible to add some numeric values indicating the quality achieved in the processing? For example the reprojection error or the ground control points RMSE.

Interactive comment on Geosci. Instrum. Method. Data Syst. Discuss., https://doi.org/10.5194/gi-2018-25, 2018.