

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

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This paper is a valuable contribution that examines the “classical” photogrammetric orientation problem associated with non-standard image blocks. In this case the high oblique configuration is one where analogue, analytical, and early digital photogrammetric workstations would have struggled to achieve orientation solutions. It is therefore interesting to see that modern techniques are able to resolve the non-optimal overlap and perspectives to achieve higher quality (and, importantly, extremely usable) results.

The paper itself is largely straightforward to read and outlines the method carried out in an easy to follow manner. I would have liked to see some more reference to ear-

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lier photogrammetric literature, as much work has been done on archive photography to update results according to (then) state-of-the-art techniques, even if outside of cryosphere research. E.g. a quick search of The Photogrammetric Record’s archive (“archive photography”) reveals relevant articles (Chandler and Clark, 1992; Fox and Cziferszky 2008; Perez et al., 2014). Some descriptions of processing method components could be simplified or updated based on photogrammetric textbook references, e.g. the standard interior orientation step.

Title: a suggestion for improvement is “Precise DEM extraction from Svalbard using 1936 high oblique imagery”

Abstract could do with a final sentence with “conclusion” statement

Line 20: photogrammetric scanners used in the 1990s can maintain good geometric geometry? It’s not clear what you mean by “normalized” here.

Stereo-overlap is low (typically 60% along-track and 20% cross-track) compared to modern standards, *which are...?*

In addition, I have marked areas in the manuscript where some minor rephrasing or editing is required (attached PDF).

Please also note the supplement to this comment:

<https://www.geosci-instrum-method-data-syst-discuss.net/gi-2018-25/gi-2018-25-RC1-supplement.pdf>

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