Interactive comment on "PyTrx: A Python toolbox for deriving velocities, surface areas and line measurements from oblique imagery in glacial environments" *by* Penelope How et al.

Anonymous Referee #2

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The authors present an image processing toolbox dedicated to glacier studies. Chapter 1 (Introduction) and chapter 2 (background) are clear, but can be merged in a single chapter to avoid some redundancy. Chapter 3 review different aspects to be considered in the post-processing. Anyway, authors refer to many publications issued from their community and should at least cite 2 or 3 papers issued from the image processing community that has work a lot in the past on image calibration and stereo vision (some tools and algorithms mentioned in that paper are issued from this community). What should be discussed in that part is the limitation of existing methods versus the specificity of the applied field studied. At the end of this chapter, authors should add a synthesis of what is addressed and solved in their present work. In chapter 4 : Please

do make scheme of your processing workflow as mentioned in the text. The camera calibration lean on the use method available in a Matlab Toolbox, which method was used. Why not use available resources in open access and integrate them in your tool ? Paragraph 4.1 described the data set used with simplifications. What are the consequences of your interpolation for DEM ? Paragraph 4.3 How the authors integrate the natural illumination in their image processing approach? This part could take also benefit of image segmentation by region approaches (see multi spectral imagery). Paragraph 4.4 requires a good stability of the observation sensor used on site. Paragraph 4.6 Analysis of several sequences coupled with obtained results should confirm the efficiency of the tool. What is the average computing time ? Chapter 5 Could take benefit of ground truth using an outdoor controlled environment coupled with an alternative analysis approach for instance using DinSAR or Stereo vision. Finally, no measurement uncertainty after using this image processing toolbox are mentioned, neither spatial resolution of initial images. Though the authors want to focus on the presentation of their toolbox, it has to be addressed or at least referenced somewhere.