Dear Editor,

We are sending the major revision of the manuscript entitled "Incorporating InSAR kinematics into rock glacier inventories: Insights from eleven regions worldwide" (tc-2021-342).

We would like to thank the reviewers for their careful and constructive comments to the paper. In response to their suggestions, we did the following main changes:

General

- We changed the title
- We corrected some references

Abstract

- We updated the text according to the reviewer's comments

Introduction

- We updated the text according to the reviewer's comments
- We rewrote the last paragraphs to better define the purpose and aim of the work

Study region

- We updated the text according to the reviewer's comments

Method (3.1)

- We updated the text and figure according to the reviewer's comments

Method (3.2)

- We updated the text according to the reviewer's comments

Method (3.3)

- We updated the text according to the reviewer's comments
- We changed the figure with a new one
- We rewrote much of the text to better explain the velocity classes of moving area adopted, pros and cons, motivations
- We rewrote much of the text to better explain the methods and the differences between the two approaches adopted to classify the moving areas

Method (3.4)

- We updated the text according to the reviewer's comments

Results

- We updated the text according to the reviewer's comments
- We modified the figures to be more consistent with the text
- We moved two tables in the supplementary material

Discussion (5.1)

- We updated the text according to the reviewer's comments
- We added a new figure to explain the subjectivity of the method

Discussion (5.2)

- We updated the text according to the reviewer's comments
- We added a new paragraph about alternative techniques that can be used

Discussion (5.3)

- We updated the text according to the reviewer's comments

Discussion (5.4)

- We updated the text according to the reviewer's comments
- We rewrote much of the text to better discuss the discrepancies between the two approaches adopted to classify the moving areas

Discussion (5.5)

- We added this new section to discuss the further application potential of this work

Conclusion

- We updated the text according to the reviewer's comments

Supplementary material

- We added a new figure to explain the manual classification of moving areas
- We added three new figures to explain the subjectivity of the method

The response to each individual comment posted by the reviewers is included in the "reviewer comment", including the new text that has been encompassed in this review.