

Geosci. Model Dev. Discuss., referee comment RC1  
<https://doi.org/10.5194/gmd-2022-229-RC1>, 2022  
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## **Comment on gmd-2022-229**

Anonymous Referee #1

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Referee comment on "AutoQS v1: Automatic parameterization of QuickSampling based on training images analysis" by Mathieu Gravey and Grégoire Mariethoz, Geosci. Model Dev. Discuss., <https://doi.org/10.5194/gmd-2022-229-RC1>, 2022

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This very interesting paper would ease the use of multiple-point statistical simulation by optimizing the parameters that generally require manual tuning before acceptable results are obtained.

The main problem with the current version is that it has been written in a hurry, it contains too many typos, and, more importantly, the explanations are unclear, sometimes because of brevity, sometimes because of improper English usage, sometimes because the author presumes that the reader knows much more than he should.

The paper needs a thorough review of the text to make it understandable to someone who is not an expert in MPS simulations and might not have worked with either QS or DS. A few more sentences or paragraphs explaining some of the parameters or some of the technicalisms used would provide a better understanding. A rearrangement of some of the sentences is also necessary to ensure that the flow of information is logical.

Many sentences with interesting statements are thrown out in the middle of paragraphs with which they are unrelated without supporting evidence.

And most importantly, the authors must emphasize that their approach is valid for a specific training image. When new simulations are to be generated, a new optimization must be carried out.

An annotated manuscript is attached with detailed comments.

Please also note the supplement to this comment:

<https://gmd.copernicus.org/preprints/gmd-2022-229/gmd-2022-229-RC1-supplement.pdf>