

Geosci. Model Dev. Discuss., author comment AC4 https://doi.org/10.5194/gmd-2021-174-AC4, 2022 © Author(s) 2022. This work is distributed under the Creative Commons Attribution 4.0 License.

## Reply on RC3

Mirko Mälicke

Author comment on "SciKit-GStat 1.0: a SciPy-flavored geostatistical variogram estimation toolbox written in Python" by Mirko Mälicke, Geosci. Model Dev. Discuss., https://doi.org/10.5194/gmd-2021-174-AC4, 2022

I thank Anonymous Referee #3 for the many helpful comments to improve the figures. This is highly appreciated. Please find the *Referee comments (in italic)* below, followed by my answer.

1. A grid should be embedded in Figure 1 to make visualisation easier. **Answer:** Agree. This is a good idea.

2. A histogram can be plotted separately along with Figure 2 with fitted normal distribution so that it's easier to visualise data distribution and accuracy of prediction. **Answer:** While SciKit-GStat allows making separated plots, I personally prefer the way it is plotted. The histogram is visualizing the count of point pairs for each of the distance lags, on top of the corresponding lag class. Which I find quite useful. Unfortunately, I am not sure what I should fit a normal distribution to and what ,prediction' is referring to, here.

However, I will revise the figure caption to make more clear, what is actually shown.

3. A grid should be embedded in Figure 4 with more distinguishable colour bands to simplify visualisation.

**Answer:** Thanks for the suggestion. I will add a grid to all three subplots and consider changing the color bands, i.e. to the same as used in figure 10.

4. How did you plot figure 6? Which data is used? A paragraph on data description can be provided

**Answer:** I refer to my answer to minor comment #5 of the first referee comment (https://doi.org/10.5194/gmd-2021-174-AC1) and my answer to comment #2 of the second referee comment (https://doi.org/10.5194/gmd-2021-174-AC3). They address this issue and I will revise the sections.

- 5. In figure 7, what does the legend show? a more descriptive legend should be provided. **Answer:** I agree and will add a label to the legend and extend the figure caption.
- 6. *In figure 9, the axis should be labelled.* **Answer:** Thanks for pointing this out.
- 7. Figure 10 can be redrawn with high resolution along with an axis labelled **Answer:** Thanks, I will add the label and include a high-resolution figure.

8. *Make figure 11 a bit bigger* **Answer:** I will change figure 11 from a one-column to a two-column figure.