

## ***Interactive comment on “Mapping of satellite Earth observations using moving window block kriging” by J. M. Tadić et al.***

**Anonymous Referee #1**

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The paper presents in a clear way how contiguous maps of XCO<sub>2</sub> and sun induced fluorescence can be created by the window block kriging algorithm. The results are looking promising and the technical description is clear and easy to follow. What is missing from my point of view is a validation of the created data with ground measurements or state of the art data sets of the given quantities. At least for the XCO<sub>2</sub> example, the authors already refer to the Hammerling (2012a, 2012b) data. However a side by side comparison is missing. If comparison data sets are missing, a cross validation can be used to check, whether the maps are reasonable at the chosen points. Beside this major remark, my minor remarks are:

P. 5383 line 27: I disagree with the statement that one is not able to characterize the estimation uncertainty in the binning by averaging map creation. The uncertainty of the

C2193

mean value can be estimated by the (weighted) standard deviation or quantiles of the given sample distribution.

P. 5394 line 4: Figure 6 is missing in the paper. The author might refer to figure 5.

Beside this remarks I think that the work is worth to be published.

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C2194