

## ***Interactive comment on “Niger discharge from radar altimetry: Bridging gaps between gauge and altimetry time series” by Stefan Schröder et al.***

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We have two additional, noteworthy points:

1) The reviewer wrote: "Line 15: LRM altimetry has been used to produce hundreds of series over narrow reaches, up to a few tens of meters wide (see for example those in the Amazon basin distributed by hydroweb). I may have missed the publications (and none is given to support the statement) but I did not read that either Cryosat-2 or S3A did much better, up to now. SAR just enables sampling more small reaches than LRM does."

Although publications on CryoSat-2 and Sentinel-3 are still not numerous, Schneider et al. (2018) show that Cryosat-2 outperforms previous altimetric missions for rivers of

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average width of about 300 meters, as the Po river. Our group found similar conclusions for the Rhine and Elbe river.

2) The reviewer wrote: "Authors mention that the S3A data are distributed with 2 re-tracking algorithms the OCOG and the Samosa ones. I suggest that both algorithms will be tested in their study."

We mistakenly understood that the reviewer meant the S3A data from Copernicus Open Access Hub and GPOD. The S3A "distribution", i.e. the Copernicus data, are indeed provided with two different retracking algorithms: OCOG and Samosa-2 – in GPOD, the Samosa+ retracker is used. Up to now, we have not shown the Samosa-2 results because the OCOG gave better results in our case. Following the suggestion of the reviewer, we will comment also on the second retracker.

### **Literature:**

Schneider, R., Tarpanelli, A., Nielsen, K., Madsen, H., Bauer-Gottwein, P., 2018. Evaluation of multi-mode CryoSat-2 altimetry data over the Po River against in situ data and a hydrodynamic model. *Advances in Water Resources* 112, 17–26. <https://doi.org/10.1016/j.advwatres.2017.11.027>

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Interactive comment on *Hydrol. Earth Syst. Sci. Discuss.*, <https://doi.org/10.5194/hess-2019-36>, 2019.

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