

Interactive comment on “Satellite radar altimetry for monitoring small river and lakes in Indonesia” by Y. B. Sulistioadi et al.

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1. General Comments

The authors gratefully thank the 2nd anonymous referee for his/her critical comments. These comments and suggestions are vital in improving the quality of this manuscript, as the authors desired. In the following sections, each comments and corrections are addressed. The final version of the article will reflect the changes listed here. Regarding the Technical Corrections, the authors prepared the response in a table that could not be included here. Please see the supplement for more complete response, including response for each Technical Corrections.

2. Specific Comments

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2.1. Some additional background or references are needed to justify some assumptions investigated relative to the “buffers” of the lake

Solutions/Explanations:

It is realized that the hypothesis on the influence of distance between satellite altimetry footprint center and the lakeshore was not well-posed in the introduction part and only mentioned briefly in the method section (p. 2833). A paragraph that discusses this matter, along with some background references will be added into the introduction section of the revised version of the manuscript.

References: Sarmiento and Khan (2010) studied the Great Slave Lake (GSL) and found that Jason-1 performed worse measurement over areas within 20 km “buffer” distance to the coastline, as compared to Topex/Poseidon measurement within 10 km distance to the coastline.

2.2. Interpretation of results with conclusions being drawn from insufficient data, in particular the case of narrow river where no validation data available

Solutions/Explanations:

The same concern was posed by the first referee. The offered solutions are to rephrase all related statements regarding the altimetry measurement on virtual station UM03 that has 54 m river width. Emphasize in the text that the water level fluctuation was only “indicated” rather than actually “measured”. In the conclusion section, it has been mentioned using “potentially observable” term. The same situation happens to the measurement of Karangmumus River.

2.3. Need more detail in determining the water level anomaly when more than one point is available during a satellite pass

Solutions/Explanations:

The most critical process was outlier removal, which then followed by averaging. Will

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explain explicitly in method section of the revised version of the manuscript.

Please also note the supplement to this comment:

<http://www.hydrol-earth-syst-sci-discuss.net/11/C1252/2014/hessd-11-C1252-2014-supplement.pdf>

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 11, 2825, 2014.

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