

Interactive comment on “Informing a hydrological model of the Ogooué with multi-mission remote sensing data” by Cecile M. M. Kittel et al.

Anonymous Referee #2

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The paper investigated the use of multi-mission remote sensing data to force, calibrate and validate a lumped conceptual rainfall-runoff model on an ungauged Ogooué river basin in Africa. The paper is clear and well written. I enjoyed to read this study because it is well thought out and organized. The Figures are appropriated even if I would prefer bigger (especially Figure 3, 6 and 7). I recommend the publication of the paper after minor changes below specified.

Some references are not properly assigned to the concept. An example is the paper of Berry et al. (2012) mentioned at P1 Line24 and P2 Line 13 to underline the decline of in-situ gauging networks. I think different papers can replace this citation [1, 2, 3]. Please check also the reference Schumann and Domeneghetti (2016) at P25 Line 26.

Plots a, b, c of Figure 2 are not mentioned and commented in the text. Please provide

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description. Moreover, P6 Line 4 “(Figure 2, c and d)” should be replaced with “(Figure 2, d and e)”.

P19 Line 2: “. . . and simulated the two models in the two basin helves”. What does the authors mean with “two models”?

Table 4: in the caption parenthesis are mentioned but they are not present in the table. Please correct.

Table 7: the acronym MD is not specified in the text or in the caption.

References:

[1] C. Vörösmarty, A. Askew, W. Grabs, R. G. Barry, C. Birkett, P. Döll, B. Goodison, A. Hall, R. Jenne, L. Kitaev, J. Landwehr, M. Keeler, G. Leavesley, J. Schaake, K. Strzepek, S. S. Sundarvel, K. Takeuchi and F. Webster, “Global water data: A newly endangered species,” *Eos Trans AGU*, vol. 82, no. 5, pp. 54–58, Jan. 2001.

[2] N. Sneeuw, C. Lorenz, B. Devaraju, M. J. Tourian, J. Riegger, H. Kunstmann and A. Bárdossy, “Estimating runoff using hydro-geodetic approaches,” *Surv. Geophys.*, vol. 35, no. 6, pp. 1333–1359, 2014.

[3] D. M. Hannah, S. Demuth, H. A. J. van Lanen, U. Looser, C. Prudhomme, G. Rees, K. Stahl and L. M., Tallaksen, “Large-scale river flow archives: importance, current status and future needs,” *Hydrol Process.*, vol. 25, no. 7, pp. 1191–1200, Mar. 2011.

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