Interactive comment on “Data assimilation of in-situ and satellite remote sensing data to 3D hydrodynamic lake models” by Theo Baracchini et al.

Anonymous Referee #2

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The ms is well-written and presented, reinforcing the expectation that satellite data providing additional data coverage improve the data assimilation results assimilated along with in-situ observations of 3D lake models.

The DA method used was EnKF.

The authors should briefly address data assimilation using variational method i.e. 4DVAR method, along with displaying relative sensitivity of model to the type of observations being assimilated.

Model error should also be briefly discussed. See for instance:


Another issue to address is the question of existence of an upper limit to the amount of information that can be assimilated and the improvement in model error.