

Earth Syst. Sci. Data Discuss., referee comment RC1
<https://doi.org/10.5194/essd-2022-313-RC1>, 2022
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Comment on **essd-2022-313**

Anonymous Referee #1

Referee comment on "A dataset for lake level changes in the Tibetan Plateau from 2002 to 2021 using multi-altimeter data" by Jiaming Chen et al., Earth Syst. Sci. Data Discuss., <https://doi.org/10.5194/essd-2022-313-RC1>, 2022

This study provides the time series of water level for lakes in the Qinghai-Tibetan Plateau between 2002 and 2021 using altimeter data from Envisat, ICESat-1, CryoSat-2, Jason-1, Jason-2, Jason-3, SARAL, and Sentinel-3A. The water level data in 2002-2021 provided by this study is not new, and have been reported by couple of previous studies. This study did not present well such as time series of lake level and not story focused such as the mention the discharge without close relation with study study. Moreover, the authors did not know the background information of lakes over the Tibetan Plateau well. I can not recommend the publication of this manuscript (dataset).

1) Although this study provides the time series of water level of lakes in the Qinghai-Tibetan Plateau from eight altimetry products, this dataset is not new compared with published studies, especially in a limited period (2002-2021). Hydroweb and other websites have provided open access lake level data since 1992, which has covered the altimetry data used in this study.

2) The presentation of this study is not good such as Figures 3 and 4. Flowchart 1 and 5 should be combined together. For a scientific paper, the figures should be drawn by a scientific standard. Moreover, the offset among the different altimetry data was addressed? How?

3) What is the difference of boundaries between Qinghai-Tibetan Plateau and Tibetan Plateau? How the comparison of time series of altimetry data and in-situ? Why the streamflow and discharge data are used, but the analysis of water level and advantage of your study are not clear?