

## ***Interactive comment on “Worldwide version-controlled database of glacier thickness observations” by Ethan Welty et al.***

**Aparna Shukla (Referee)**

aparna.shukla22@gmail.com

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General comments: This research presents a commendable effort by group in managing a huge (> 3000 glaciers) repository of the world-wide glacier thickness data (nearly 4 million). As already mentioned in the manuscript this dataset has immense importance as far as refining the estimates of global ice reserves is concerned. Authors have also tried to incorporate the field measurements in this version of GlaThiDa v3, which further enhances its importance. Overall, data-wise it is a great contribution, however, there is room for improvement. Specific comments: 1. The paper focuses on describing the data attributes, characteristics and sources. In my opinion including some illustrations of the data (for certain regions or may be one per method) and field photographs of the glaciers investigated (one from each region) may be included to

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make the paper more interesting. Since it seems to be the first attempt of the authors to incorporate the field-based thickness measurements in the GlaThiDa v3, adding the same would add more value to the manuscript.

2. The uncertainty part can be improved further in the dataset as well as in the manuscript. Certain method can be employed to standardize the uncertainty associated with the data. Thereafter the data may be sorted in terms of associated uncertainty such that the end-user may know the error involved, and they may choose the data accordingly as per the permissible error-limit of their respective applications.

3. The authors discuss the spatial and temporal coverage of the data in sections 3.1.1 and 3.1.2 respectively. Here they mention that there are certain regions across the globe where the data density is scarce. This mandates that it should also be discussed here that what measures can be taken to improve the data density over these regions and how is it planned to add the temporal data. A discussion on how does these regions of low representation affect the overall quality and import of the database.

Technical comments: In general, the manuscript is well-written except for some places (e.g., line 10 of the Introduction section), the sentences are too long and wordy, making it complicated to understand. This should be checked throughout the manuscript. Besides, at places the fonts are different (e.g., P2, L21; P4, L15). If this is on purpose then it is fine but looks quite abrupt and awkward.

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