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Interactive comment on "A restructured and updated global soil respiration database (SRDB-V5)" *by* Jinshi Jian et al.

Anonymous Referee #2

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This is a data release of an update to a database of global soil respiration measurements, the first version of which was released 10 years ago. Since then, 4 updates have been made to the database. This most recent update was significant, changing the structure of the database and adding or changing many fields, thus warranting this data release paper. This paper very clearly documents the background of the original database, past utility and importance of the SRDB, the justification for a significant update, and the future potential usage of the newest update to the SRDB. I offer comments below in hope this can be used to further improve the paper.

Line 76: I would add "each year" to the end of the sentence ending in "its use continues to increase" 115: One detail that is not addressed is the file format. Has the file format of the SRDB changed (it appears not)? A reader might wonder if any changes have

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occurred in terms of the file format. Please add some text that indicates what the original file format is and why it was kept this way or changed in the new version.

130: “had not been used” - it is unclear exactly what this means. If zero papers have reported these metrics in the past 10 years, please state that.

160 - Methods in general: Metadata on latitude and longitude of locations would be extremely helpful for those hoping to link soil respiration measurements to spatial data. Please consider adding this, or if not, please provide justification why this was not considered. My main concerns are: Studies reporting lat/lon at different levels of precision (i.e., decimal points), but the implied precision in the database might not actually reflect what was recorded. Studies using different methods for recording lat/lon - GPS units may have wide variation in spatial accuracy. Most studies may not report spatial accuracy/precision. Reporting one general lat/lon for the study site versus lat/lon for the individual study sites. How is this handled? This is a significant issue for linking up to spatial data.

Figured 3 and 4: I understand the utility of density distribution plots and use them often myself, but they do not convey any information about the number of observations. I think there are 2 ways the paper can improve in this respect: Offer explanation in the Figure captions about what the density plots represent, and provide the number of observations for each category presented.

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