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Open Access Earth System Science Data Discussions

Interactive comment on "An integrated observation dataset of the hydrological-thermal-deformation dynamics in the permafrost slopes and engineering infrastructure in the Qinghai-Tibet Engineering Corridor" *by* Lihui Luo et al.

Anonymous Referee #2

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The manuscript by Luo et al. described multiple observation data sets in the Qinghai-Tibet Engineering Corridor (QTEC). I agree with the previous reviewer's comments about the hard-won data in this manuscript. What is particularly commendable is that the author chose a study area where railway, highway and electrical towers are all distributed on a frozen soil slope. Temperature, air and ground temperature, is the most important indicator of changes in frozen soil. The author uses drones equipped with thermal infrared sensors to monitor spatial changes in surface ground tempera-

ture. This data should be relatively rare. This set of data is of great significance for studying the interaction between frozen soil engineering and slopes. Overall, this is a well-prepared manuscript with useful data. The study area is very typical and distinctive. Therefore, I don't have any major suggestions on how to improve the manuscript. Please see some minor comments below.

Minor comments: 1. Please provide a more detailed metadata description of the data set.

2. It is recommended to add the running notes in the code, and increase the readability of the code, so that users can not only execute, but also modify and improve.

3. Please delete Figure B3. If possible, just describe it in the text.

4. The latest references need to be cited, and some references need to be added. As in the following article: Wu, Q., Sheng, Y., Yu, Q., Chen, J., and Ma, W.: Engineering in the rugged permafrost terrain on the roof of the world under a warming climate, Permafrost and Periglacial Processes, 31, 417-428, https://doi.org/10.1002/ppp.2059, 2020.

5. This manuscript focuses on ground and drone monitoring data, so it is recommended to delete InSAR data.

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