The manuscript *"Data quality control and calibration for mini-radiosonde system Storm Tracker in Taiwan"* describes a twin sounding campaign of the Storm Tracker and the Vaisala RS41 radiosonde, where the latter is used as reference. The results of the twinsoundings are used to derive a correction for the Storm Tracker temperature and humidity profiles, using a statistical method based on the cumulative distribution function (CDF). I have considerable concerns with the way the twinsoundings were performed (payload configuration) as well as the applied analysis method, both of which I think affect the results and conclusions of this study.

One concern is with the method applied to analyse the data from the coincident twinsoudings. Since these soundings are performed with two different radiosondes on the same balloon, this allows for a direct comparison of the profile data. Using a statistical method like the cumulative distribution function (CDF) seems to me like an unnecessary complication. To my understanding the CDF-based method as employed by Ciesielski et al., is applied when comparing radiosonde data taken under similar meteorological conditions albeit not coincidently on the same rig. The advantage of coincident twinsounding data is that it allows to directly determine the bias + associated uncertainty between both systems. Furthermore, the physical mechanism that is causing the bias between both radiosondes is warming by solar radiation that is counteracted by convective cooling by the air flowing over the sensor (ventilation). The efficiency of the convective cooling is directly linked to the altitude-dependent ambient air pressure. The CDF method that is applied in the manuscript does indeed derive corrections for pressure ranges, but the purpose of further analysing the differences in sense of ambient temperature is not clear to me.

For a description of the Storm Tracker radiosonde and its sensors, the reader is referred to another publication (Hwang et al. 2020) . However, for a good understanding and interpretation of the results presented in this manuscript a (brief) description of the radiosonde design, and specifications of the sensor are essential. Also a description of the payload configuration for the twinsoundings is necessary, currently the reader has to deduce the payload configuration from a rather poor-quality (underexposed) photograph. From the photograph in Figure 1 it becomes clear that the two radiosondes are connected back-to-back. The sensor boom of the RS41 is pointing upwards with the T + RH sensors probing undisturbed and uncontaminated air. However the integrated T & RH sensor of the Storm Tracker radiosonde is located about 20cm lower, directly in front of the radiosonde's housing. As a result the air flowing over the T & RH sensors is very likely contaminated by the housing/casing of the radiosonde, affecting the measurements. This payload configuration most likely explains the large temperature between the Storm Tracker and the RS41 shown in Figure 2. I was very surprised by the large temperature difference between both radiosondes (approx. 5 K at ground level), and my first thought was that this was caused by a calibration error of the temperature, but this bias is not present for the nighttime flight presented in Figure 10, so that it is indeed likely that this large bias results from solar radiation.

It can't be excluded that the large differences between Storm Tracker and RS41 are caused by the payload configuration, rather than by the performance of the individual sonde types. This raises the question whether the observed differences in this comparison study reflect differences that would be observed between both radiosondes when flying on separate balloons, or on payloads that are better configured for comparisons. Therefore, I am not sure whether the results found in this study are representative for the differences/bias between both radiosonde types and to my opinion it is doubtful that this study can be used to derive a generic correction for T & RH profiles of the Storm Tracker radiosonde.

If the temperature error due to solar radiation is that large, 5 K at ground level and up to 10 K at higher altitudes, it also inevitably limits the quality of the temperature profile after correction, i.e. there will be a considerable associated uncertainty remaining. In such a situation the preferred strategy is to improve the design of the temperature sensor so that it is less sensitive to solar radiation.

While reading the manuscript I noticed various other things that I will mention below and that the authors may consider well-meant advice for a future publication. Since the study described in this manuscript has some fundamental flaws, I consider it unlikely that it will go to the stage of e.g. major revisions.

- The literature references provided in the introduction all are quite old, and recent work on the characterisation of solar radiation temperature error is missing. Important progress in this field is made by the efforts of the GRUAN community, which should be mentioned in the introduction. Suggested publications are for example:

- von Rohden et al AMT2022 (doi 10.5194/amt-15-383-2022)
- Lee et al. AMT2022 (doi 10.5194/amt-15-1107-2022)
- Hoshino et al. AMT2022 (doi 10.5194/amt-15-5917-2022)
- GRUAN-TD-5 (https://www.gruan.org/documentation/gruan/td/gruan-td-5)

- Briefly describe the characteristics of the radiosonde and its sensors. A more detailed description can indeed be provided in another paper.
- Use a regular plot for the comparison of radiosonde profiles, instead of a Skew-T diagram such as in Figure 2.
- In addition to Table 1, show a map with the location of the sites.
- Table 2 appears very full. Leave out the zeroes, since they distract and don't provide any useful information. Alternatively use another way of presenting these data, such as a e.g. a bar chart.
- Figure 8: separate for daytime and nighttime data.
- The profile shown in Figure 11 exhibits an interesting discrepancy between RS41 and Storm Tracker around 800 hPa. There is a wiggle in the Storm Tracker's temperature profile that is not seen for the RS41. It coincides with a decrease in RH. Is this a radiation effect connected to a cloud top?