This study introduces a new radiosonde “Storm Tracker” for vertical profiles measurements in the atmosphere. The study fits the scope of Atmospheric Measurement Techniques. The new sensor shows similar accuracy and resolution compared to Vaisala RS41, while being lighter and more economical. The manuscript is well written. I have only a few minor comments. Minor comments Line 19 “upper-air observational instrument”; Lines 24-25 “especially lower-level atmosphere”. Which one is more accurate? Upper-air or lower-level? Lines 186-197. Adding the metal shield decreases the temperature bias from 2.47 ◦C to 2.18 ◦C in the daytime, but increases the temperature bias from 0.13 ◦C to 1.17 ◦C. I am not sure if adding the metal shield is worthwhile since the daytime bias decrease is much smaller than the nighttime bias increase in terms of percentage. In particular, adding the metal shield increases the temperature bias to 9 times of that without it at night. Figure 13 The texts in legends are too small.

Thank you for the time reviewing this study and the comments

For the terms “upper-air” and “lower-level”, the term “upper-air” used among the radiosonde community indicates that the sensing device (like Strom Tracker) goes up with a balloon or a kite, in contrast to “dropsonde” which goes down from an aircraft. So both descriptions about Strom Tracker are not contrasting to each other, but “upper-air” means it is a radiosonde observing while going upward, and the term “lower-level” means it targets to low-level atmosphere observations.

For adding the metal shield, even though it increases the mean bias during nighttime, the overall variance is lower. Nevertheless, the Storm Tracker sonde is still under early development stage and the design is flexible at this point. In addition, a comprehensive correction procedure is currently underway.

Finally, Fig. 10 (previous Fig.13) is updated according to your comments.