Dear Young et al.,

Thank you for the revised manuscript. I am pleased to recommend publication subject to minor revisions, which will be assessed by the editor. The reviewers are broadly satisfied with the revisions and have a few minor suggestions.

However, my first editor comment does not appear to have been fully understood. The issue is not whether angular errors can be corrected through calibration, but rather what level of residual angular uncertainty is acceptable for different applications.

For example, at a measurement range of 1 km, an angular error of 0.2° corresponds to a positioning error of approximately 3.5 m. This may be negligible for one-point turbulence statistics but can be critical for coherence measurements if the nominal separation between two measurement volumes is only 10 m. A differential pointing error of this magnitude could introduce a 35% error in their spatial separation, potentially leading to substantial errors in the estimated coherence decay parameters. While the revised discussion quantifies the impact of angular errors on wind speed, it does not address their implications for two-point turbulence statistics. I therefore maintain my recommendation that the authors briefly discuss application-dependent pointing accuracy requirements.

Please address this outstanding point alongside the remaining minor comments from the reviewers in your next revision.

Best regards,

Etienne Cheynet

Dear Etienne Cheynet,

Thank you for your recommendation and thank you for clarifying your first editor comment.

We recognise the importance of discussing the error tolerance for different applications and therefore have added the text below to the discussion in Section 4 of the revised manuscript to help address this.

All other modifications made to the revised manuscript are in response to the minor comments raised by Anonymous Referee #2.

Best wishes,

The acceptable level of elevation error will therefore differ depending on the intended application of the measurements and the desired measurement range. Elevation errors resulting in wind speed errors within 1% are likely acceptable for one-point mean wind speed and turbulence statistics used for wind resource assessment. As shown in the example in Figure 14, this is achievable for small elevation errors of 0.03° out to long-range, but also for large angular errors of 0.2° if the measurement range is 1 km. However, smaller acceptable angular errors are required

for coherence studies determining two-point turbulence statistics using two independent scanning lidar devices. As shown by Cheynet et al. (2021), in such cases angular errors should be much smaller than the lidar beam separation distance to avoid introducing large errors in the estimated coherence decay coefficients. In the context of the elevation error results found in this experiment, angular errors within ±0.03°, corresponding to positioning errors of e.g. ±0.5 m at 1 km and ±3m at 5 km, are expected to be desirable for such studies.