

Dear Dr. Wang, dear editorial team,

many thanks for handling our manuscript entitled “Automated atmospheric profiling with the Robotic Lift (RoLi) at the Amazon Tall Tower Observatory”. Many thanks also for your positive evaluation.

We would like to respond here to the “editor decision” comment in the EGUSPHERE manuscript system. You commented there:

“Editor comment (EC): I would like to accept this interesting work, subject to one referee's concern that while the paper has concentrated on describing the concept, it lacks sufficient data, thus requiring a more conservative tone in the abstract and other sections.”

Author comment (AC): Many thanks for the positive overall evaluation of our manuscript. We suppose that you refer to the following comment be referee #2:

Referee comment (RC): “Although I certainly appreciate articles focused on the development and engineering of measurement systems, it must be stated that they often precede the scientific articles using data collected by these systems. Therefore, the system description articles are often a little thin on the scientific results, focusing their science mostly on the validation and trustworthiness of the newly developed system.”

AC: We agree with your assessment here that technical manuscripts, like this one, (should) lean towards a detailed description of instrumentation, rather than a comprehensive analysis of data sets. In this particularly case, we aimed for the right balance between showing and discussing enough data to validate the capability of the RoLi system, however, to not anticipate results for the follow-up RoLi research papers. In order to address your concern that conclusions might be drawn on a comparatively thin data basis, we revised the relevant statements, aiming for a more “conservative” tone. In the abstract, the following statement has been revised:

“First measurement results show pronounced spatiotemporal patterns in the altitude profiles of temperature, humidity, fog, and aerosol particle concentration and size, providing new insights into the diel interplay of convectively mixed daytime and stable stratified nighttime conditions.”

which reads now as follows:

“First measurement results show spatiotemporal patterns in the altitude profiles of temperature, humidity, fog, and aerosol particle concentration and size. This proves RoLi's technical capability to resolve the diel interplay of convectively mixed daytime and stable stratified nighttime conditions.”

In page 14, line 311, we added the following statement to clarify the role and scope of the initial RoLi data presented in the manuscript:

“The meteorological and aerosol profile data shown in the following paragraphs represent selected parts of a larger data set. The selected profiles are meant to demonstrate the technical capabilities and limitations of the RoLi system. Only selected data are shown here in order not to anticipate subsequent studies. A detailed analysis of the profile data will be subject of follow-up studies.”

We hope that this addresses your concerns. We, the author team, are of course available if further changes or modifications of the text are needed.

With best regards,

Sebastian Brill