

General Comments

The manuscript provides a detailed description of the RAAVEN UAS observations collected during the TORUS and TORUS-Lite field campaigns, including the instrument configuration, data processing procedures, quality-control methods, and uncertainty characterization. The resulting dataset contains in situ measurements in different storm-relative regions around supercell thunderstorms, which are highly valuable given the scientific importance and relative scarcity of publicly available observations in such hazardous and dynamically complex environments. Overall, the data processing and quality-control procedures appear scientifically sound and carefully implemented.

I recommend publication after revision. My main concern is related to the readability of the manuscript. In its current form, the paper reads somewhat more like a technical report than a self-contained scientific data paper. Although the manuscript is not overly long, the presentation could be improved by providing more background information on the scientific motivation, the comparison and advantages of these observations relative to other observational datasets, and how similar UAS or in situ datasets have been used in previous severe-storm studies. These additions would help make the manuscript more accessible to readers who are less familiar with this topic, while placing the dataset in a broader scientific context and better demonstrating its potential value for future research.

Major Comments

1. The title contains several uncommon abbreviations but lacks more general terms that directly describe the dataset and its scientific content. This may make the manuscript less discoverable in literature searches and may also make it difficult for readers to immediately understand the main subject of the paper.
2. The Introduction would benefit from a more comprehensive background description. At present, the manuscript moves rather quickly to the RAAVEN deployments and data-processing procedures, while the broader scientific context is not fully developed. The authors may consider adding some background paragraphs that introduce supercell thunderstorms and the importance of in situ observations, briefly compare conventional severe-storm observing platforms with UAS-based measurements, and explain the advantages and challenges of RAAVEN observations in hazardous near-storm environments. These additions would help readers better understand the motivation for the dataset and the specific contribution of the RAAVEN observations.
3. In Section 3, the authors introduce the storm-relative mission areas used in the RAAVEN deployments, including the left flank, right flank, near-inflow, and far-field regions. However, the manuscript would benefit from a brief explanation of how these regions differ in terms of their dynamical and thermodynamical characteristics and how these differences motivated the deployment strategy. Such clarification would help readers better understand why the UAS observations were organized around these specific mission areas and how the resulting data may be used to examine different storm-scale processes.
4. Since different sensor configurations were used in 2019 and 2023, the authors should clarify whether any consistency check was performed between the two in situ

observational datasets.

5. The criteria used for wind quality control and subsequent statistical analyses should be better justified. It would be helpful for the authors to clarify whether these thresholds are based on instrument limitations, previous studies, empirical testing, or sensitivity analyses, and whether the main conclusions are sensitive to these choices.

Minor Comments

1. Table 2 is very long and difficult to read in the main text. The authors may consider moving it to the supplementary material or the data repository webpage. If possible, basic information on each observed storm, such as its lifecycle, development stage, and intensity, could also be added.
2. Please check all abbreviations throughout the manuscript and ensure that they are defined at first use.
3. The caption of Figure 8 could be made more detailed to improve readability.
4. Please briefly explain the apparent abrupt change shown in Figure 11f.
5. The summary section could include a brief outlook on future observational plans related to this project and discuss whether further intercomparisons with other TORUS observing platforms are planned to further evaluate the RAAVEN dataset.
6. Please ensure that the Data Availability statement is presented as a separate section before the summary section, following the ESSD format requirements.
7. Please carefully check the formatting of the references for consistency with the journal style.