

Response:

We sincerely thank Referee #2 for the positive evaluation of the value of our vertically resolved observational dataset entitled “Measurement Report : Vertical New Particle Formation characteristics observed at 356m Shenzhen Meteorological Tower” (Manuscript ID: egusphere-2026-4039) and for recognizing its potential contribution to understanding the interactions between boundary-layer dynamics, atmospheric mixing, and new particle formation in urban environments.

Following the comments from Anonymous Referee #1, we have carefully re-examined the data analysis, results interpretation, and presentation throughout the manuscript. We have revised the manuscript accordingly, including clarification of the particle size range consistency, refinement of NPF event classification, correction of inconsistencies in the interpretation of analysis results, improvement of figure presentations, and revision of the discussion to avoid unsupported mechanistic conclusions.

We have also added additional analyses, including boundary-layer height and turbulence observations, to better characterize the relationship between vertical NPF variability and atmospheric dynamics. The revised manuscript now provides a more robust interpretation of the observations while explicitly acknowledging the limitations associated with the observational coverage and the lack of direct flux measurements.

We appreciate the reviewer’s recognition of the importance of this dataset, and we believe that the extensive revisions have substantially improved the clarity, consistency, and scientific rigor of the manuscript.