I thank the authors for carefully considering all the feedback. I appreciate that they improved many descriptions and some algorithms resulting in a clearer manuscript.

Thank you for demonstrating the optical resolution. I can see almost all lines of the microscope slide you are showing. So, it is fair to say the resolution is on the order of 50µm given that these lines have a similar thickness.

Regarding small particles, I agree with your concern that you are likely “loosing” (not detecting) some of the smallest particles during image processing. I am still curious, however, to see examples of 2-px particles alongside their contour and Dmax, A, p values. As you have published data, I will have a look and do not suggest adding anything to the paper.

In the following I am only asking for a few clarifications, which mostly refer to changed sections. I am referring to line numbers of manuscript-version2.

Sect 3.1 Particle Detection

L153: “… particles in the moving foreground mask are systematically too large.”
You talk about a moving ROI, then moving mask, and eventually about moving foreground mask. I am not sure what is the "particle" at this stage? Or do you mean the ROI is larger than the particle?
L154: Replace “region of interest (ROI)” with “ROI”.
L154: “non-rotated”. Is there a better way to define this type of smallest rectangular box? (major axis along x or y?)
L156-159: What is a “gap in the contour”? For me a contour is a continuous line. It is hard to follow exactly what is done here. Perhaps and illustrated example of what could happen and how it is prevented would help a lot (could be in Appendix B).

Sect 3.2 Particle Matching, L 191-192: The sentence “Since pixel measurements are discrete with 1 px steps, the PDF is integrated for an interval of ±0.5 px” for me omits why the PDF is integrated. This may be obvious for some, but for clarity I would anyhow include it (correct me if I am wrong):
“To determine the probability (of, for example, a certain vertical extent), the PDF is integrated over an interval of ±0.5 px (representing the discrete 1-px steps).”

Sect 3.4 Particle Tracking, L358-359 “shape difference”: Shape refers to area here? Better say “area difference” then.

Sect 3.4, Fig 4c,d. It took me some time to understand what exactly is shown. Perhaps small changes in the caption can improve it:
“… shows a frame of the leader (c) and the matched frame of the follower (d). …
For each particle (surrounded by boxes) the particle track is shown. The tracks indicate past …”

Sect 3.5, L270-273: This sentence suggests that the PSD is a property averaged in size bins. Isn't it instead the number concentration in size bins (normalized with the bin width)?
So, I would suggest being correct and clearer by saying something like (guessing how you determine concentration and account for size dependent observation volume, see comment on L335-336 below):
"To estimate the particle size distribution (PSD), i.e., the particle number concentration as a function of size, the individual particle data are binned by particle size (1 px spacing, i.e. 43.125 or 58.75 .m) and the number of particles in the bins are divided by the observation volume. These binned number concentrations are then averaged over all frames during one-minute periods. Then also binned particle properties such as area and perimeter are averaged to one minute resolution for."
Correct me if I am wrong and try to improve sentence accordingly.

Sect 3.6 Calibration, L330,331: From the Response Comments you seemed to agree that it was sufficient to say "cuboid". But I see twice the term "rectangular cuboid".

Sect 3.6 Calibration, L 336-336: " To account for the removal of partially observed particles detected at the edge of the image, the effective observation volume is reduced by Dmax/2 px on all sides."
This means that the observation volume is size dependent. What if two or more particles are in the observation volume, how is concentration calculated (as I guessed above, see comment on L270-273)? It may be good to mention the size dependence and how you take care about it (for example referring to Sect 3.5) or how it affects results, if it does). With that, you also make it clear that and how you use the observation volume, for which you just described how to determine it.

Sect 4.1
I would extend the sentence ending in L384 for clarity (of what 50% advantage means):
"... reduced to 50% more particles than observed by Parsivel and PIP."

Sect 4.3, L439 "orientating": Would "orientation" be better?

Technical:
I would, according to standards, use roman font (not italics) for indices that are descriptive (i.e. do not refer to other variables): D_{max}, D_{eq}, X_L, …
Check for inconsistent use of font (variables that appear in both italics and roman): N0*, D_{max} and D_{eq} (Fig8 caption), D_{32} (is D_{23} in Fig6 caption).