Authors would like to thank the reviewer for its careful reading, comments and inspiring suggestions. We took them into account in the revised. Hopefully, you will be satisfied with it. Please find below a point by point answer to your comments.

The manuscript by Gires et al., developed an approach to simulate the 3D trajectory of raindrops by considering the fluctuation of small-scale wind in both space and time and drift patterns of non-spherical raindrops. This study overcomes the limitations of traditional coarse wind data and effectively corrects the rainfall observation under wind drift effect. The objectives of the study clearly explained in the introduction section, as well as the contribution of work. However, some figures in the article lack elaboration, the text also has obvious formatting problems. My detailed comments are provided below:

Despite some minor issues raised below, I think the paper would be a useful addition to the literature and recommend publication after the authors address the comments/questions below.

Thanks for your positive feedback !

It's not clear what is the difference between Í v_{rel} and v_{rel}? I cannot find any explanation about v_{rel} (v without underscore) in your manuscript. However, both appear frequently in subsequent equations (e.g. line 76, line 80, line135).

\underline{v}_{rel} with an underline is the vector with three components while {v}_{rel} without any underline is the euclidean norm of this vector. This was clarified in section 2.1.

As for wind field generation part, there are still a few confusions. In line 222, what is the standard for distinguishing high and low wind speed? Is it the average speed of the three directions or something else?

The distinction was based on the average total horizontal wind (i.e. 1.8 vs. 11.8 m/s). The term high and low are arbitrary and simply refer to the difference between the two events. This was clarified in section 4.1.

In line 232, what is the resolution of the 729 x 729 x 64 grid? Besides, what does 64 refer to? Time or altitude?

The 64 corresponds to time. The resolution is actually stated at the end of the paragraph. A sentence was added to help the reader understand more easily.

The manuscript lack of the description of study area and the 3D sonic anemometer instrument. Despite the author's citation of the data, I would still like to know how the instrument works and how the wind speed data is organized. Please improve this section by adding more detailed information.

The anemometer is installed at 78 m on meteorological mast located on the Pays d'Othe wind farm in the framework of the ANR RW-Turb project. The wind farm is at roughly 120 km South-East of Paris on a slightly sloppy area. More details can be found in the data paper under discussion at ESSD (\citet{essd-2021-463} and in the data set (\citet{gires_auguste_2021_5801900}).

Some details were added and now that the corresponding data paper is online for discussion at ESSD EGU journal, the full reference is cited for interested reader.

Besides, I cannot find any description of Fig. 6 in the manuscript

Wrong name for figure reference was used in beginning of section 4.2. This is now corrected. Thanks for spotting this !

Below are specific comments and suggestions:

Line 25: “km” in the brackets may be italicized.

Done

Line 36-37: “for example” appears consecutively.

This was corrected.

Line 73/79/87/104...: Please remove spaces before colon characters.

This was corrected.

Line 96: Please add a period at the end of the sentence.

This was corrected.

Figure 1c: What is the difference between abscissa and ordinate? Which is the retrieved one?

D in abscissa is the diameter used in Thurai’s formula (Eq. 3). From this, a shape is found and a volume can be computed. From this volume, an equivolumic diameter can be assessed. It is this equivolumic diameter that is displayed in the vertical axis. It is obviously quite close ! The aim is simply to show how the small discrepancies are accounted for. This was clarified in the manuscript.

Figure 1d: Please add y-label.

This was done in the updated version of the figure.

Figure 1f: Please change “(e) Terminal fall velocity vs. equivolumic diameter” to “(f) Terminal fall velocity vs. equivolumic diameter”.

This was corrected.

Line 107: Does “SA” refer to surface area?

Yes, and this is now mentioned.

Line 119: I wonder if the drag coefficient is C_d, C_D or c_D (in Eq. 4, Fig. 1e and line 76)?

c_D is now used everywhere. Thank you for spotting this issue.

Line 140: “â ” may be “â t”.

Indeed a “t” was missing and it is now corrected.

Figure 2: Is D different from D_{eq}? Please clarify.

Yes, and this is now clarified in the caption.

Line 198: Do you refer to 0.1 mm?

Yes, this was corrected.

Line 200: “For the 2 mm drop, the scaling is slightly degraded but remains good (r2 = 0.95 for q = 1.5). α = 1.69, C1 = 0.14 and H = 0.79 is found.” I prefer to combine the two sentences into one.

The sentence was rephrased.

Figure 4: Please check the numbering order.

The figure and caption seem to be correct. What are you referring to ?

Line 221/225: Please check format of the citations.

This was corrected.

Line 242: Do you mean “at any point (x,y,z,t), a bi- or tri-linear interpolation…”ï¼

Yes and the parenthesis were added.

Line 258: Please list the specific parameter information of these 10 wind samples.

It is the same input parameters for all the samples and the parameters are listed in section 4.1. This is now clarified.

Line 275: Is the wind shift field here one of the 10 types of wind samples used in section 4.3? If yes, it is recommended to describe and highlight in Fig. 8 (e.g. in dot line); same recommend in Fig. 11.

Given that the figure is already slightly messy, authors are not sure that adding this information will be helpful. If you consider this is really important, this could indeed be envisaged.

Line 281: Please add units to the Δy numbers

This was done.

Line 289: Please unify the number format, such as “1 500” or “1500”?

1500 is now used everywhere.

Line 295: “The increase ranges from 0.1 for 0.1 mm size drop to 0.8 for drops of size 1-1.5 mm.” change to “The increase ranges from 0.1 for 0.1 mm size drops to 0.8 for 1-1.5 mm size drops.”

This was done.