JoVE Manuscript Changes: Responses to Comments by the Science Editor.

**Manuscript title:** “Methods for Measuring the Orientation and Rotation Rate of 3D-Printed Particles in Turbulence”.

Formatting note:

* Editor comment.
  + Response.

**Edits made in response to comments from the editor:**

* Please take this opportunity to thoroughly proofread the manuscript to ensure that there are no spelling or grammar issues. The JoVE editor will not copy-edit your manuscript and any errors in the submitted revision may be present in the published version.
  + Done.
* Continuity: Please highlight additional steps in section 1 (1.1.3-1.1.5) to include how some of the shapes were made in more detail for the video.
  + Done. Steps 1.1.3 – 1.1.5 have been highlighted.
* Formatting: All figures should have a title and a short description in the legend.
  + Bolded portions of the figure descriptions that would serve as their titles and added a title to Figure 5.
* 2.3.3. – How are ~250 particles measured out?
  + After reviewing the manuscript, we realized that this number should have been ~2,500, not ~250. This has been corrected, and “enough to loosely fill ~25 mL in the density-matched storage solution” has been added to the manuscript.
* 3.1.3 – Approximately what angles? “Large” is not precise.
  + Clarified by adding “(~90°)” to the step.
* Please include a figure with an image of the setup showing the position of the laser and mirrors. This could be included as a supplementary figure.
  + We have added a part b to Figure 2 showing a top view of the apparatus with the illumination beam and the mirrors.
* 4.4 – How many particles are added?
  + Clarified by changing “add all of those particles” to “add all 10,000 of those particles”.
* 4.4.2 – Does this synchronize the cameras? If so, how?
  + Clarified by adding “Use the external trigger to ensure all cameras start acquisition simultaneously and remain synchronized throughout the recording.”
* 5.1.3.1/5.1.5.1 – If this is to be filmed, please provide some direction as to what is being clicked in the software for this analysis.
  + Screen recordings of the analysis will be in the video. There is nothing being clicked in the analysis; it is a set of automatic programs that identify “tracks” where a particle is in view and fit a model orientation to the cluster of bright pixels seen on each camera, as is outlined in the manuscript. These programs will be included with the final manuscript along with sample image files.
* Please define the error in Figure 5 in the legend.
  + Done. Added “Measurement uncertainty accounts for random error from limited number of samples as well as the systematic error that results from the fit length dependence of the tumbling rate measurements.” to the legend.
* Discussion: Please discuss the critical steps and future applications of the protocol.
  + Have added a paragraph justifying the fitting used in 5.1.6 of the Protocol and have expanded two of the other paragraphs to include a more comprehensive review of critical steps and alternative methods.