

Example: How to answer the reviewers' questions.

Title: **Weak shock wave propagation**

We greatly appreciate the reviewers for their positive feedback, constructive comments, and recommendations. We believe the excellent points raised during the review process help with more significant improvement of our work.

As detailed below, we have checked all the specific comments provided by the reviewers and have made necessary modifications. We hope that all the comments have been addressed. *The corrections are highlighted in the revised manuscript.*

Reviewer #1:

1. Correct the typos and clarify the sentences as is identified in the attached manuscript.

A\ Thank you for the comments. The typos are corrected, and the suggested sentences are rewritten.

2. There is an inconsistency in quoting the errors (deviations) in the impactor velocities and their derivatives. Please address the issue in the instances marked in the manuscript.

A\ It has been corrected in the revised manuscript.

3. Has the particle velocity of the sample been validated by an independent method such as laser interferometry? Please comment on the validity of the velocities obtained with DIC.

Our result was cross-checked with available data in the literature. However, we haven't measured the particle velocity with other methods.

Reviewer #2:

1. My main technical issue is that the spatial and temporal profiles shown in Fig. 8 and subsequently, are completely free of noise and small-scale structure - despite there being clear spatial variations in the axial velocity vs position of fig. 8a) which doesn't show in fig.s 8b) and c); and also despite the fluctuations in strain shown in fig. 6c). Is this mainly due to further averaging of 2D data, to the filtering used in the DIC analysis, or to the additional smoothing described in II.D? A comparison of unfiltered, or filtered to different degrees, data would be informative.

A\ The comments are valuable. In the original manuscript, the value obtained from the unfiltered data were not included to avoid confusion.

2. Ref. 8 describes precursor waves and other structure in velocity; have you smoothed this away?

A\ We believe the precursor is weak and it may have short-lived, that is what the simulation of weak shocks shown by the previous researchers.