We use a simple geologic model for the following reasons:

a. As an initial study on this subject, i.e., amplitude investigation from FVM, we decided to start by using a simple geologic model to have full control over the expected results. We also expected reviewers to agree that such a methodological study should begin using a simple geologic model.

b. In hardrock environments, in which most FVM studies have been so far implemented, the velocity field tends to be relatively homogeneous. In such an environment, velocity variations tend to be relatively not complex so that no significant multi-pathing occurs. Therefore, we expect that a simple geologic model with a few layers and velocity contrasts can be sufficient to represent a typical geologic structure in a hardrock environment.

c. Investigation using a complex geologic model, such as multi-layer rock strata, would require a far more sophisticated approach, which takes into account various effects, including transmission losses at layer boundaries, variations of spherical divergence due to strong lateral velocity gradients, and even anisotropy. These effects play an important role in sedimentary environments but are less critical in hardrock environments. Therefore, we decided to stay away from such effects, which may mask the primary objective of our study and the ability to judge the successfulness of our approach.

We are currently still at an early stage in working on incorporating more advanced cases, such as anisotropy, into our migration algorithm. However, we strongly consider such

investigation as a further study because it is another level that demands significantly more research, and it aims for other findings that are beyond the scope of the current study.

2. *To augment the manuscript to become easier to follow for the reader, I advise to add more explanation about the theory and the performance of FVM and ADCIG with some supporting figures in the theory section.*

It will be accommodated in the revised manuscript.

3. *In figures 1 and 4, and in all basemaps the horizontal label Y is meaning less and is introduced after using. Also in figure 11, it changed to X. So I advise to unify them and change it to distance, maybe become more sensible.*

It will be accommodated in the revised manuscript.

Minor comments:

4. *Increase the X and Y axis ticks and labels in figures 6, 7, 11. It is difficult to read them now.*

It will be accommodated in the revised manuscript.

5. *Line 68: Introduce the x' after equation 5 too.*

It will be accommodated in the revised manuscript.

6. *Line 78: Using the "noise-free" is an exaggerating phrase here, because beside the KPSDM result, it is a clear image but not generally free of any artifacts.*

It will be accommodated in the revised manuscript.

7. *Line 89 and 91: It is better to change one of the names for scattering azimuth angle or illumination azimuth angle, because their symbols in figure 2 are hardly distinguishable.*

It will be accommodated in the revised manuscript.

8. *Figure 8: There isn't any red circle in the figure which is introduced in the caption.*

It will be accommodated in the revised manuscript.

Based on supplying a synthetic example which the single path is violated on, I recommend a major revision.