

## Borehole tomography: an erratum

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In a previous paper (Al-Yahya, 1985), I compared three methods for estimating slowness corrections to cells in the tomographic problem. These methods employed three different statistics as estimates: the mean, the median, and the mode of the correction distribution suggested by the passing rays. Unfortunately, there was an error in the procedure used for picking the mode in the presence of multiple peaks. This error affected the maximum likelihood (mode) solution of the last example in the paper—the only example where the mode did not produce the best (closest to the original model) solution. Following correction of the picking algorithm the mode gave good solution for all models considered, thus warranting the conclusion that the mode is the best estimate—a conclusion that I could not draw in the original paper.

To demonstrate this fact, the plots of the last example in the paper (the model having an anomaly in the middle of a constant velocity region) are regenerated here using the corrected mode-picking method. Figure 1 shows the model and the reconstructed images using the estimates mentioned above. It is clear both that using the mode in the reconstruction is as good as using the median and that the solution did not deteriorate in the late iterations.

### REFERENCES

Al-Yahya, K., 1985, An iterative solution to seismic tomography, SEP-42, p. 129-150.

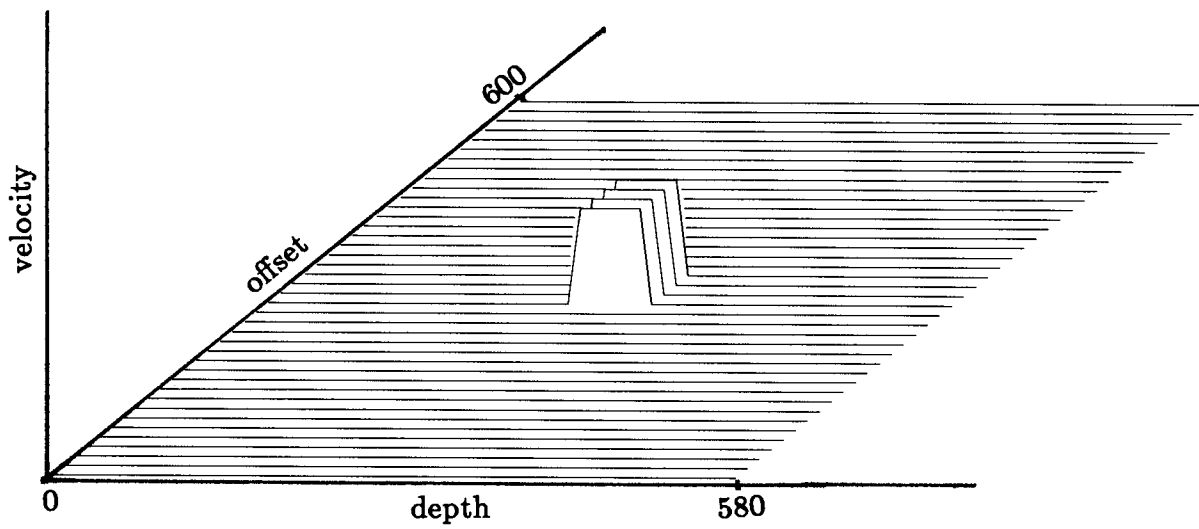


FIG. 1a. A model having a high velocity anomaly in the middle of a constant velocity medium.

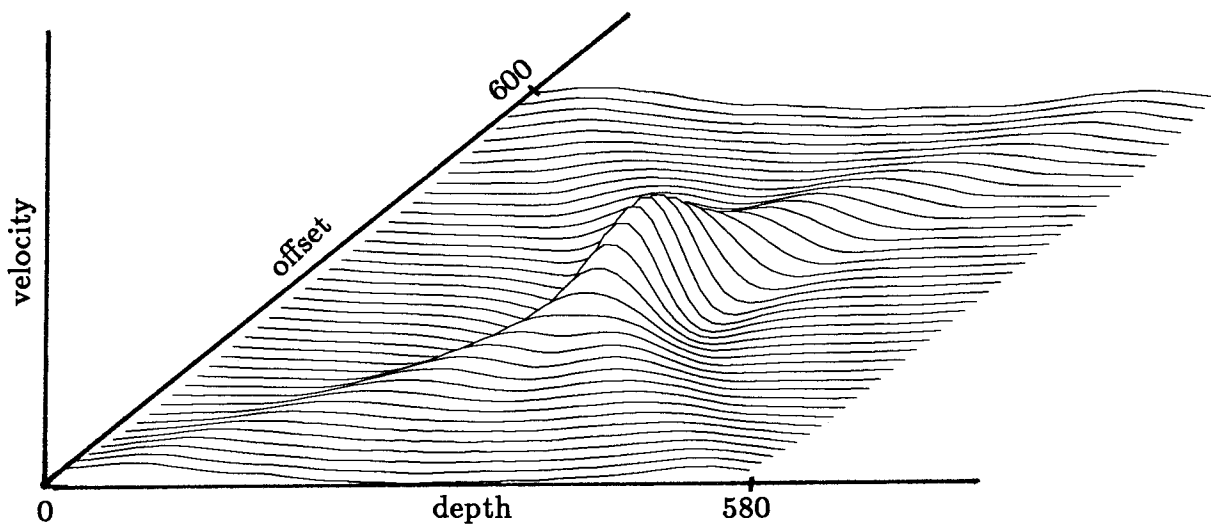


FIG. 1b. The model of Figure 1a reconstructed with the mean of suggested values used to correct a single cell.

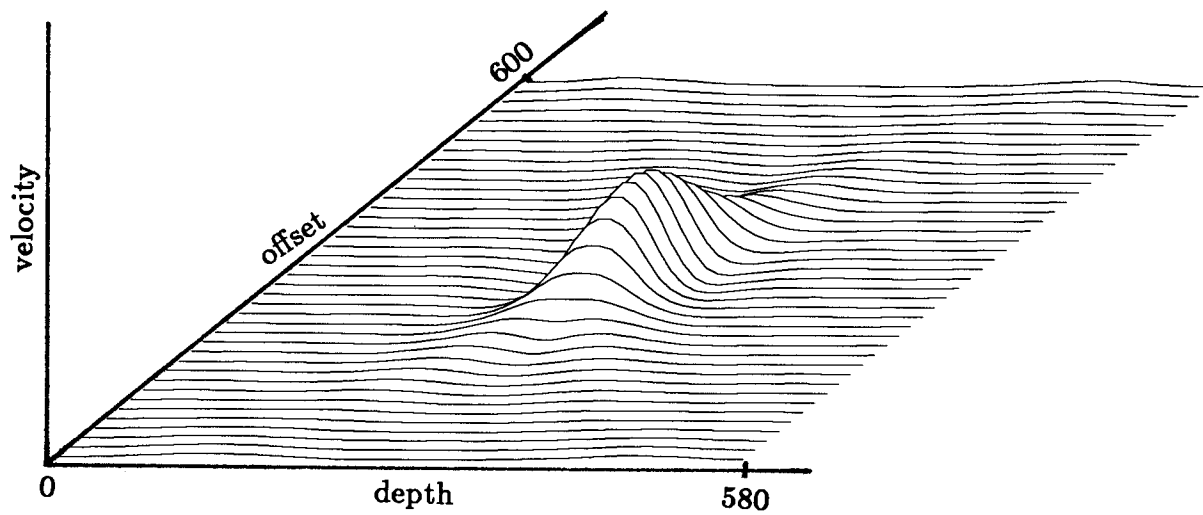


FIG. 1c. The model of Figure 1a reconstructed with the median of suggested values used to correct a single cell.

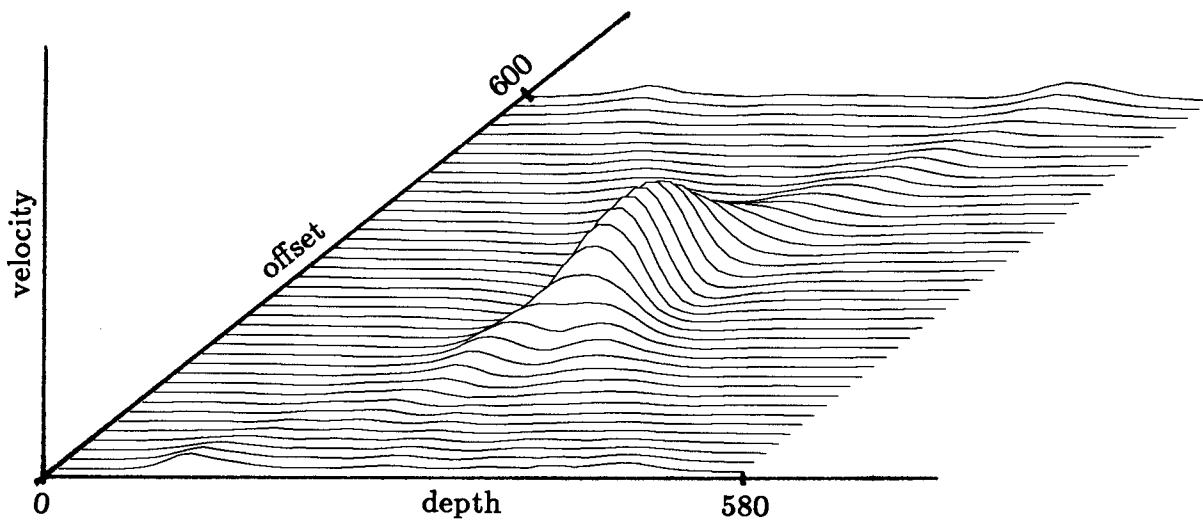


FIG. 1d. The model of Figure 1a reconstructed with the mode of suggested values used to correct a single cell.

