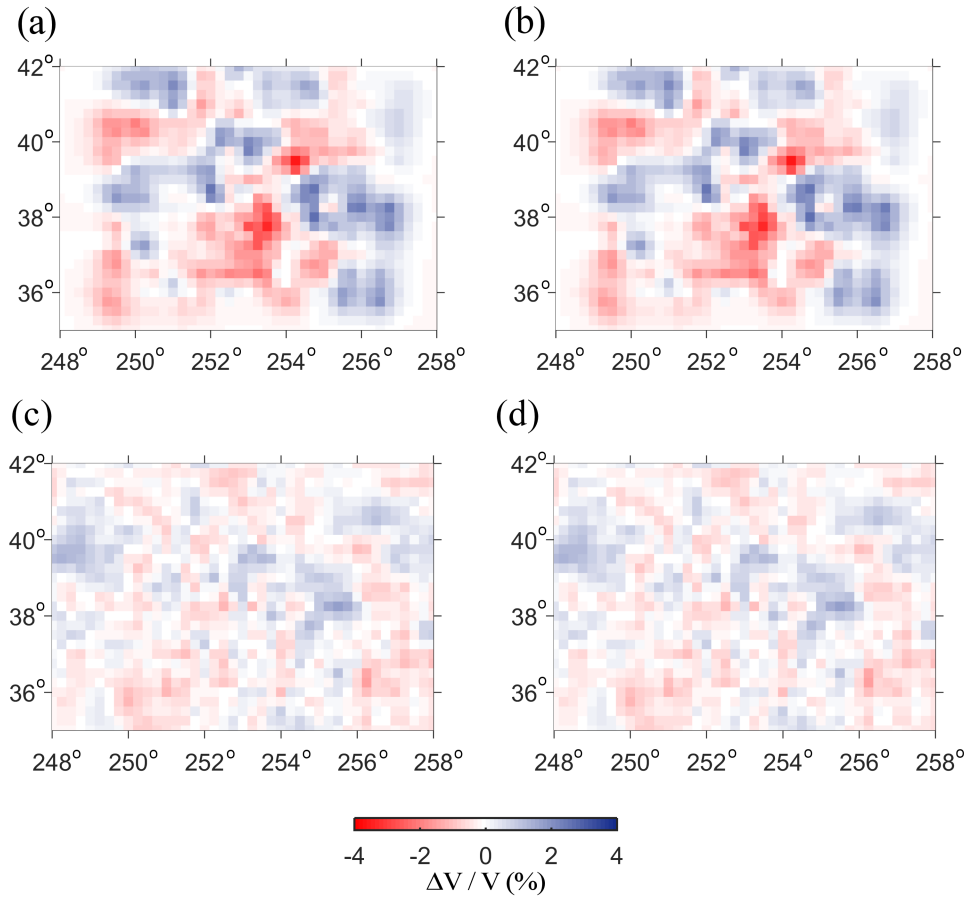


Supplementary Material



Supplementary Figure 1: A comparison of the P-wave perturbation models at 20-km depth (top row) and 400-km (bottom row) obtained by using the approaches presented in the manuscript (a and c), and LSQR algorithm of MacCarthy et al. (2011) (b and d). There are no systematic differences between the two models regardless of the poor- or well-resolved regions of the model space.