The resolution operator **R** is a critical accompaniment to tomographic models of the mantle. Tomography offers a distorted view of the real Earth. One must account for the heterogeneous spatial resolution when comparing tomographic images to conceptual 3D velocity models. By applying **R**, theoretical models are filtered to the spatial resolution of the tomographic model and the same image artifacts are introduced. We demonstrate how **R** of the tomographic model S20RTS affects thermo-chemical and iso-chemical models of convection and how it may impact model interpretation. We discuss how tomographic filters can be applied to any theoretical model, particularly as a built-in module in the code "citcomS".

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