

## Vp/Vs ratio and minerals in the transition layer

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Mineral composition of the upper mantle and the transition layer is discussed. The discussion is made using Vp/Vs ratio of the elastic wave velocities. The Vp/Vs ratio of the seismic wave distributions in the mantle are carefully estimated. The Vp and Vs models in the mantle are derived independently, so to get the accurate estimation of Vp/Vs ratio in the mantle Vp and Vs models must be chosen very carefully.

Recent advancement of seismic studies has made accurate estimation of Vp/Vs ratio possible.

Recent experiments on elastic wave velocities of mantle minerals have made possible to compare the Vp/Vs ratio in the mantle with those of mantle minerals.

The comparison made in this study shows the mineral composition in the upper mantle is peridotitic, and that in the transition-layer is eclogitic.