

Key papers
Seismic boundary layers

1 paper on global velocity models: either:

PREM: Dziewonski, A. M., and D. L. Anderson, Preliminary Reference Earth Model, *Phys. Earth Planet. Int.*, 25, 297-356. 1981.

or

ak135: Kennett, B.N.L., E.R. Engdahl, R. Buhland, Constraints on seismic velocities in the Earth from travel-times, *Geophys. J. Int.* 122 (1995) 108-124.

Paper on D'' (review): e.g.

Discontinuity:

Wyssession, M.E., T. Lay, J. Revenaugh, Q. Williams, E.J. Garnero, R. Jeanloz, L.H. Kellogg, 1998. The D'' discontinuity and its implications, in: *The Core-Mantle Boundary Region*, M. Gurnis, M.E. Wyssession, E. Knittle, B.A. Buffett, Eds. American Geophysical Union, Washington D.C., (1998) 273-297.

Or for heterogeneity:

Garnero, E. J. (2000), Lower mantle heterogeneity, *Ann. Rev. Earth Planetary Sci.*, 28, 509-37

And for anisotropy:

Kendall, J.-M., and P. G. Silver, Investigating causes of D'' anisotropy. In: *The core mantle boundary region*, edited by: M. Gurnis, M. Wyssession, E. Knittle and B.A. Buffett. Geodynamic Series, 28, AGU, Washington D.C., USA, 97-118. 1998.

or

Kendall, J.-M., Seismic anisotropy in the boundary layers of the mantle, in *Earth's Deep Interior: Mineral Physics and Tomography From the Atomic to the Global Scale*, eds. S. Karato, A.M. Forte, R.C. Liebermann, G. Masters, and L. Stixrude, pp. 133-159, AGU, Washington, D.C., U.S.A., 2000.

or

Lay, T., Q. Williams, E. J. Garnero, L. Kellogg, and M. E. Wyssession, Seismic wave anisotropy in the D'' region and its implications, in: *The Core-Mantle Boundary Region*, ed. M. Gurnis, M.E. Wyssession, E. Knittle, B.A. Buffett, American Geophysical Union, Washington D.C., 299-318. 1998.

Upper mantle Transition:

Shearer P.M., Upper mantle seismic discontinuities. in *Earth's Deep Interior: Mineral Physics and Tomography From the Atomic to the Global Scale*, eds. S. Karato, A.M. Forte, R.C. Liebermann, G. Masters, and L. Stixrude, pp. 115-131, AGU, Washington, D.C., U.S.A., 2000.

(or

Flanagan M.P. and Shearer P.M., Global mapping of topography on transition zone discontinuities by stacking SS precursors, *J. Geophys. Res.*, 103, 2673-2692, 1998.)

Array processing:

Rost, S., and C. Thomas, Array seismology, methods and application. *Rev. Geophys.*, 10.1029/2000RG000100, 2002.