

### Références - cours no 3

- Andraut, D., M. Munoz, N. Bolfan-Casanova et al. (2010) Experimental evidence for perovskite and post-perovskite coexistence throughout the whole D" region, *Earth Planet. Sci. Lett.*, 293, 90-06.
- Burke, K., B. Steinberger, T. H. Torsvik, N. A. Smethurst (2008) Plume Generation Zones at the margins of Large Low Shear Velocity Provinces on the core-mantle boundary, *Earth Planet. Sci. Lett.*, 265, 49-60.
- Catalli, K., S. Shim and V. Prakapenka (2009) Thickness and Clapeyron slope of the post-perovskite boundary, *Nature*, 462, 782- 786
- Cottaar, S. and B. Romanowicz (2012) An unusually large ULVZ at the base of the mantle near Hawaii, *Earth. Planet. Sci. Lett.*, in press
- Courtillot, V., Davaille, A., Besse, J., Stock, J., 2003. Three distinct types of hotspots in the Earth's mantle. *Earth Planet. Sci. Lett.* 205, 295-308.
- De La Morra, S., L. Boschi, P. J. Tackley, T. Nakagawa, D. Giardini (2011) Low seismic resolution cannot explain S/P decorrelation in the lower mantle, *Geophys. Res. Lett.*, 38, L12303
- Dziewonski, A. M., V. Lekic and B. Romanowicz (2010) Mantle Anchor Structure: an Argument for Bottom up Tectonics, *Earth and Planetary Science Lett.*, 299, 69-79
- Grocholski, B., K. Catalli, S. Shim and V. Prapenka (2012) Mineralogical effects on the detectability of the postperovskite boundary, *Proc. Nat. Acad. Sci.* , 109, 2275-2279.
- Hernlund, J., C. Thomas and P. Tackley (2005) A doubling of the post-perovskite phase boundary and structure of the Earth's lowermost mantle, *Nature*, 434, 882-886.
- Hirose, K., R. Sinmyo, N. Sata, and Y. Ohishi (2006), Determination of post-perovskite phase transition boundary in MgSiO<sub>3</sub> using Au and MgO internal pressure standards, *Geophys. Res. Lett.*, 33, L01310, doi:10.1029/2005GL024468.
- Ishii, M., and J. Tromp, Normal-mode and free-air gravity constraints on lateral variations in velocity and density of Earth's mantle, *Science*, 285, 1231-1236, 1999.
- Kuo, B.-Y., Garnero, E.J., Lay, T., 2000. Tomographic inversion of SSKS times for shear velocity heterogeneity in D": degree 12 and hybrid models. *J. Geophys. Res.* 105, 28,139-28,157.
- Lay, T. and D. Helmberger (1983) A lower mantle S-wave triplication and the shear velocity structure of D", *Geophys. J. R. Astr. Soc.*, 75, 799- 837.
- Lay, T. and E. Garnero (2007) Reconciling the Post-Perovskite Phase With Seismological Observations of Lowermost Mantle Structure, in , *Post Perovskite, the last mantle phase transition*, AGU *Geophys. Mon. Series* 174, 129- 153.
- Lekic, V., S. Cottaar, A. Dziewonski and B. Romanowicz (2012) Cluster analysis of global lower mantle tomography: anew class of structure and implications for chemical heterogeneity *Earth. Planet. Sci. Lett.*, in press
- Masters, G., G. Laske, H. Bolton, and A.M. Dziewonski (2000) The relative behavior of shear velocity, bulk sound speed, and compressional velocity in the mantle: implications for chemical and thermal structure. In: *Earth's Deep Interior: Mineral Physics and Tomography From the Atomic to the Global Scale*, S.-I. Karato, A.M.

- Forte, R.C. Liebermann, G. Masters, and L. Stixrude (Eds.), AGU, Washington, D.C., U.S.A., pp 63-87.
- Ni, S., and D.V. Helmberger (2003) Ridge-like lower mantle structure beneath South Africa, *J. Geophys. Res.*, 108, B2, 2094, doi:10.1029/2001JB001545, 2003.
- Ohta, K., K. Hirose, T. Lay, N. Sata, Y. Osishi (2008) Phase transitions in pyrolite and MORB at lowermost mantle conditions: Implications for a MORB-rich pile above the core-mantle boundary, *Earth Planet. Sci. Lett.*, 267, 107-117.
- Romanowicz, B. (2001) Can we resolve 3D density heterogeneity in the lower mantle? , *Geophys. Res. Lett.*, 28, 1107-1110.
- Romanowicz, B., and Y. Gung (2002) Superplumes from the core-mantle boundary to the lithosphere: implications for heat flux, *Science*, 296(5567), 513-516
- Su, W. and A.M. Dziewonski (1997) Simultaneous inversion for 3-D variations in shear and bulk velocity in the mantle, *Phys. Earth Planet. Inter.*, 100, 135-156.
- Tateno (2009) Determination of post-perovskite phase transition boundary up to 4400 K and implications for thermal structure in D" layer, *Earth Planet. Sci. Lett.*, 277, 130-136.
- Thomas, C. , T. Heesom and M. Weber (2002) Investigating the heterogeneity of the D" region beneath the northern Pacific using a seismic array, *J. Geophys. Res.*, 107, B11.
- Thomas, C., E. J. Garnero and T. Lay (2004) High-resolution imaging of lowermost mantle structure under the Cocos plate, *J. Geophys. Res.*, 109, B08307.
- Tkalcic, H., B. Romanowicz, and N. Houy (2002) Constraints on D" structure using PKP(AB-DF), PKP(BC-DF) and PcP-P travel time data from broadband records, *Geophys. J. Int.*, , 148, 599-616
- Toh, A., B. Romanowicz, Y. Capdeville, and N. Takeuchi (2005) 3D effects of sharp boundaries at the borders of the African and Pacific Superplumes: observation and modeling, *Earth and Planet Sci. Lett.*, 233, 237-253, 2005.
- van der Hilst, R., M. V. de Hoop, P. Wang, S.-H. Shim, P. Ma, L. Tenorio(2007) Seismostratigraphy and Thermal Structure of Earth's Core-Mantle Boundary Region, *Science*, 315, 1813- 1817.
- , F. Scherbaum, J. Schlittenhardt, and M.
- Körnig (1996) The structure of the lowermost mantle as determined from using seismic arrays, in *Seismic Modelling of the Earth's Structure*, Edited by E. Boschi, G. Ekström, and A. Morelli, pp. 399-442, Istit. Naz. Di Geophys., Rome.
- Wysession, M.E., T. Lay, J. Revenaugh, Q. Williams, E. Garnero, R. Jeanloz, and L. Kellogg (1998) The D" discontinuity and its implications, in *The Core-Mantle Boundary Region*, edited by M. Gurnis, M.E Wysession, E. Knittle, and B.A. Buffet, pp. 237-297, AGU, Washington, D.C, 1998