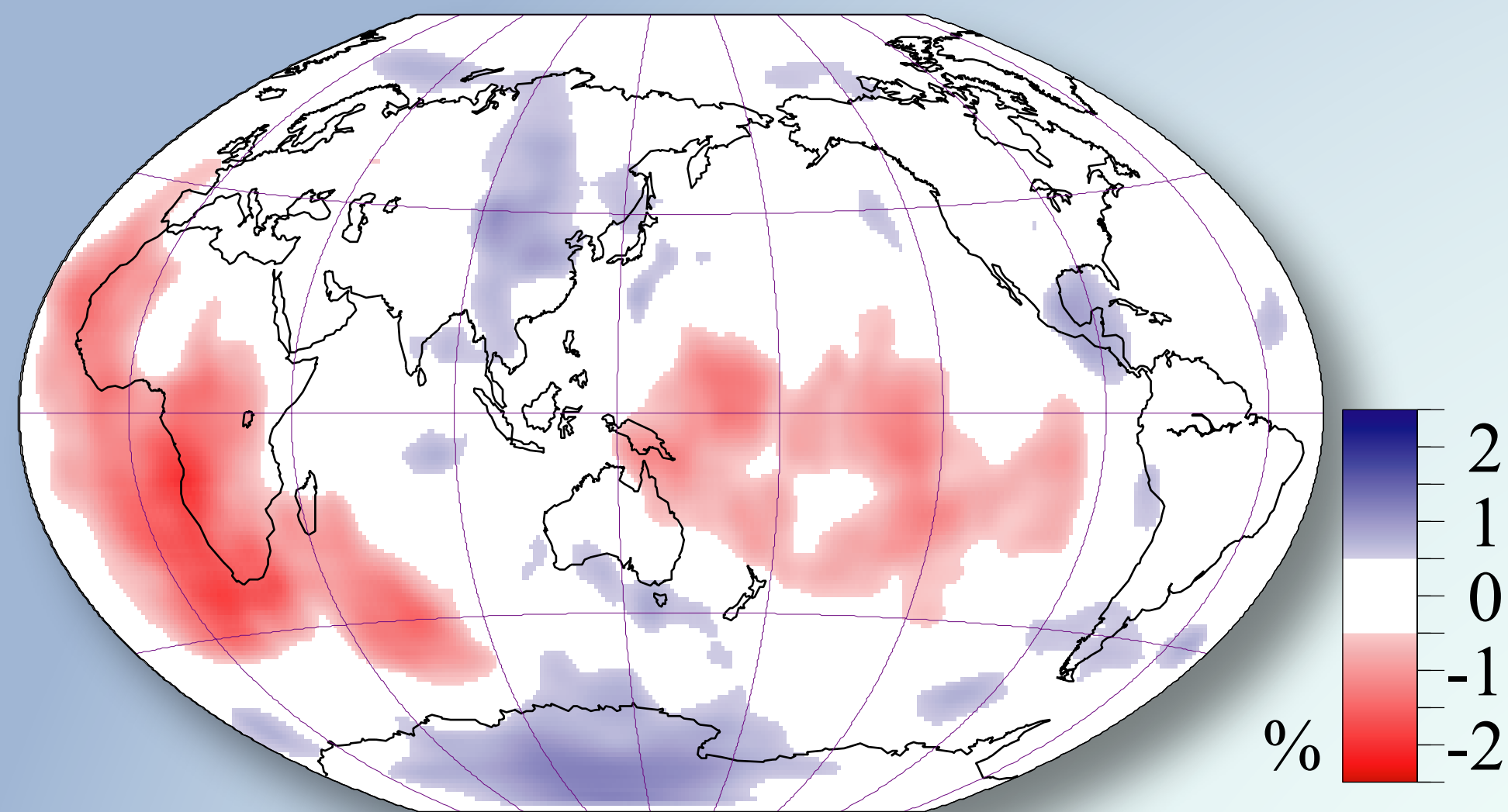


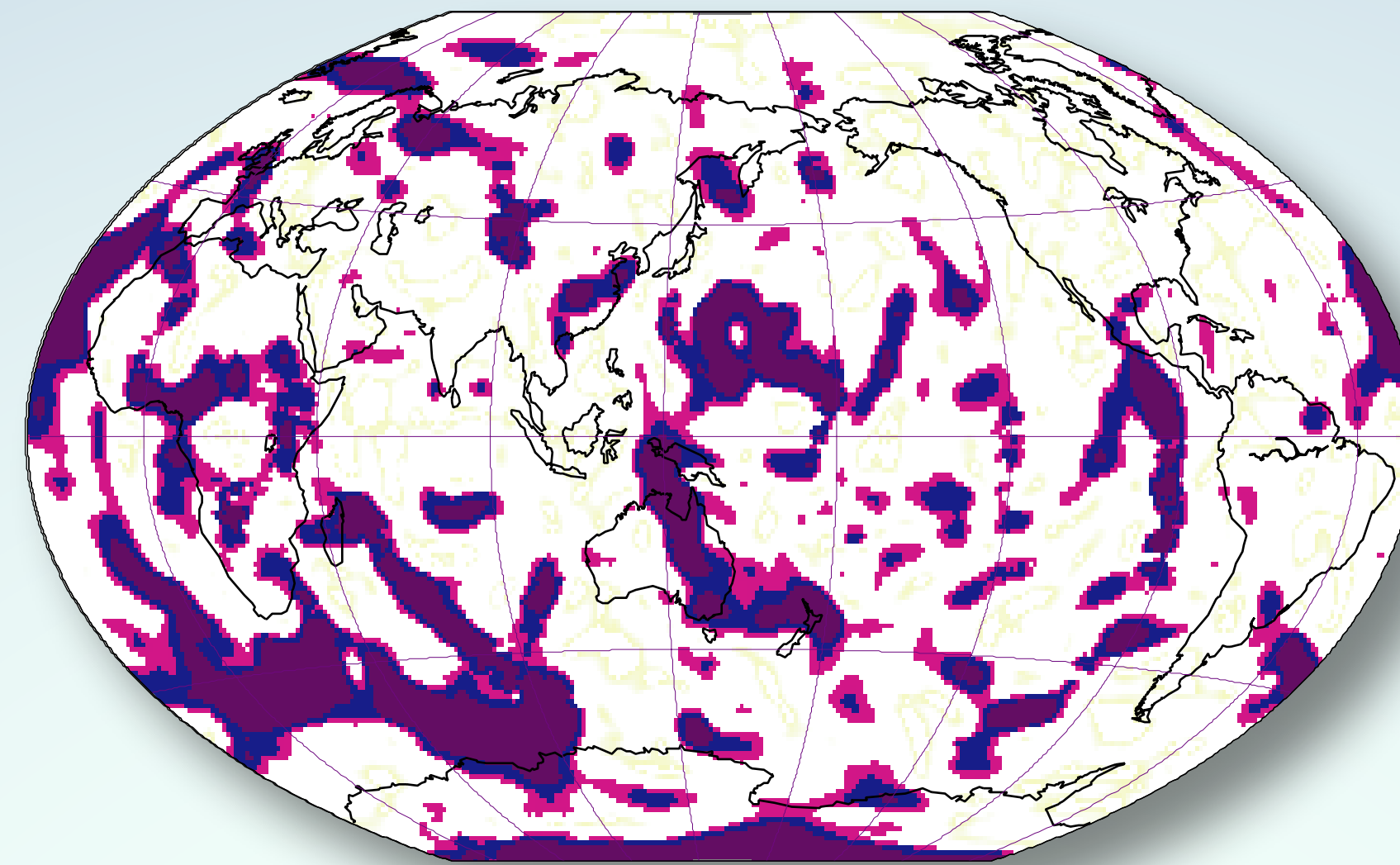
Deep mantle phenomena from seismology, geodynamics geochemistry, geomagnetism, and mineral physics

D" shear wave velocity perturbations



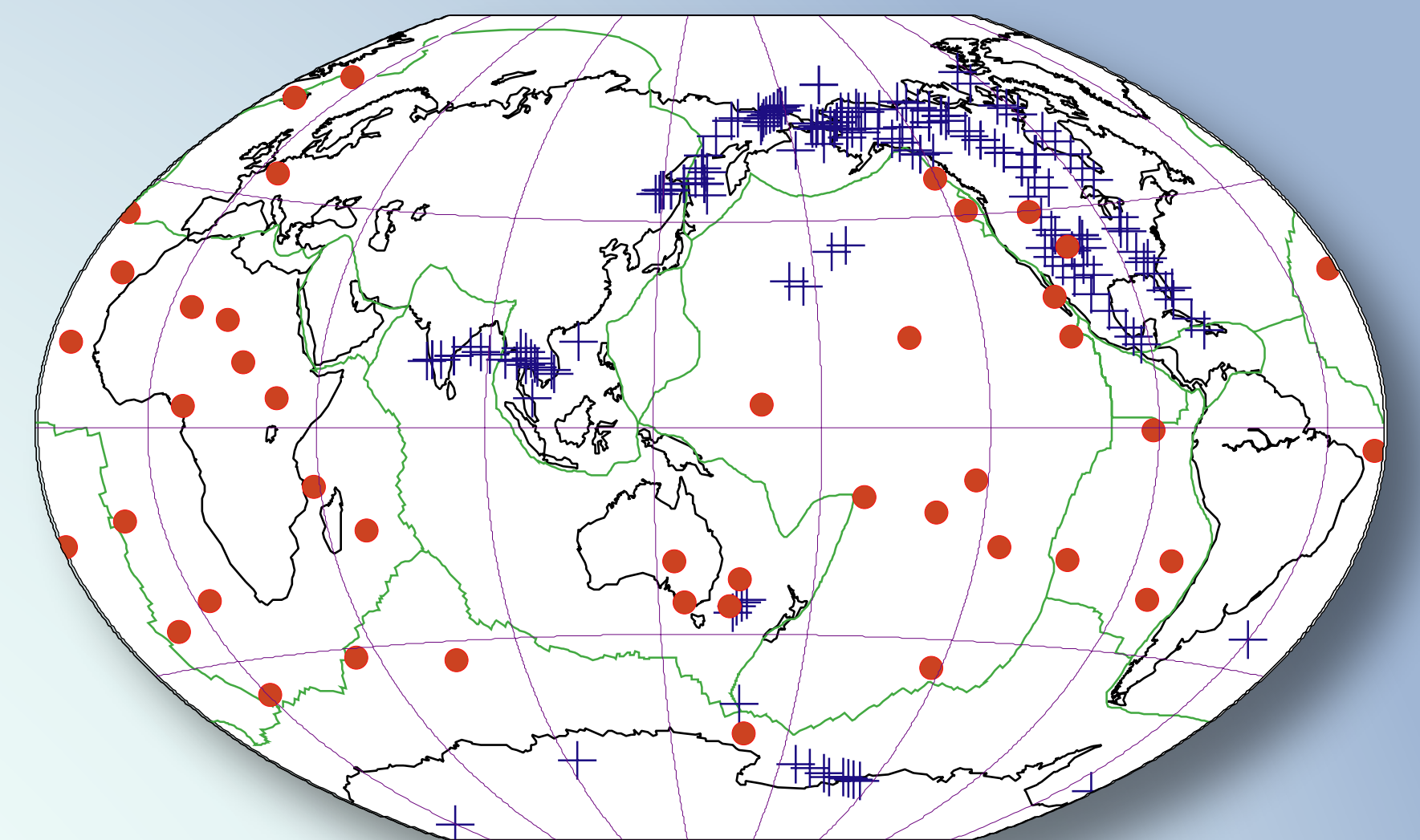
after Grand [Phil. Trans. R.S. Lon., 2002]

Strongest D" lateral seismic velocity gradients



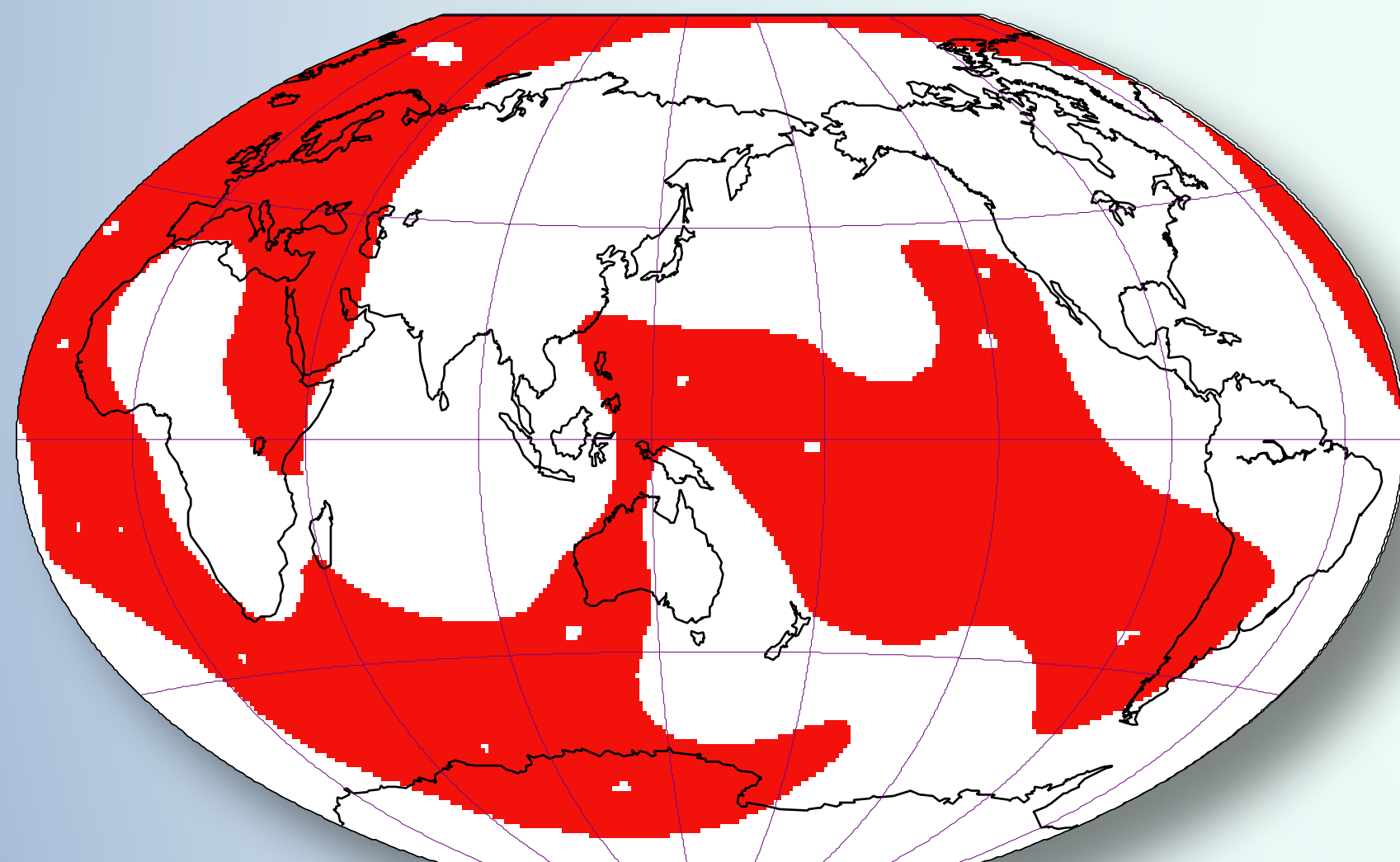
after Thorne et al. [PEPI, 2004]

Hotspots and D" density anomalies



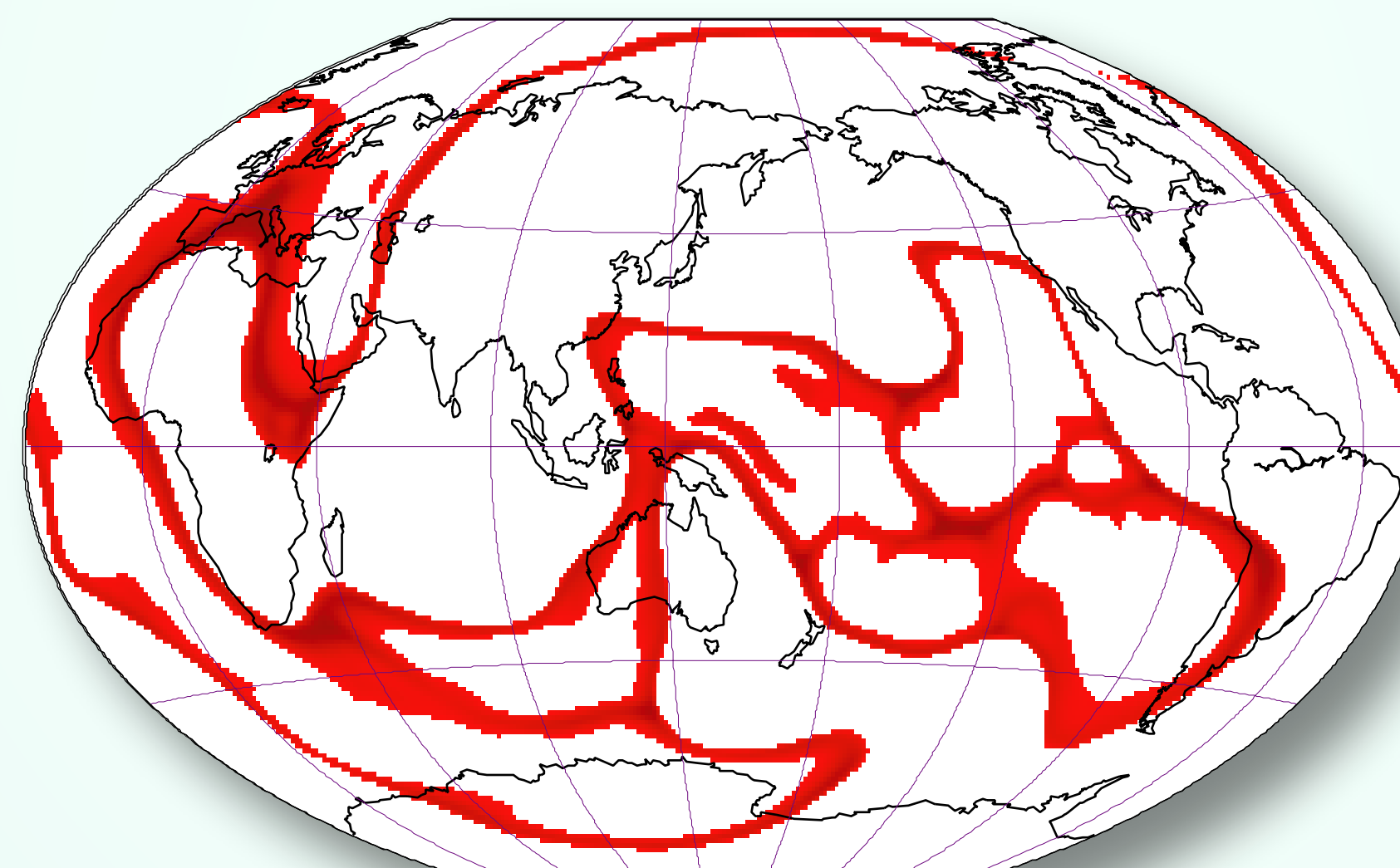
after Lithgow-Bertelloni and Richards [Rev. Geophys., 1998],
Steinberger [JGR, 2000]

Geodynamically derived dense piles



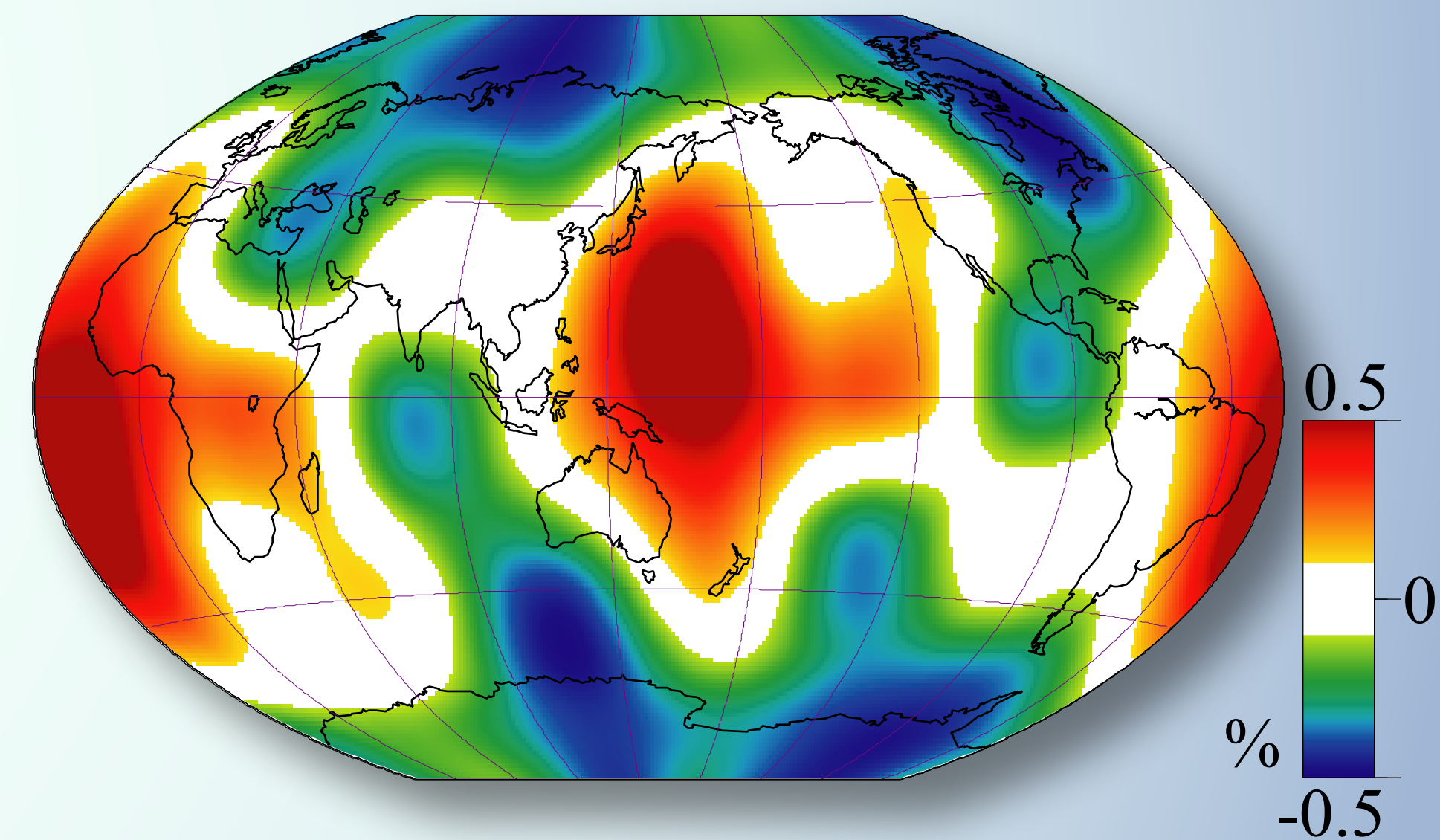
after McNamara and Zhong [Nature, 2005]

Geodynamical D" temperature anomalies



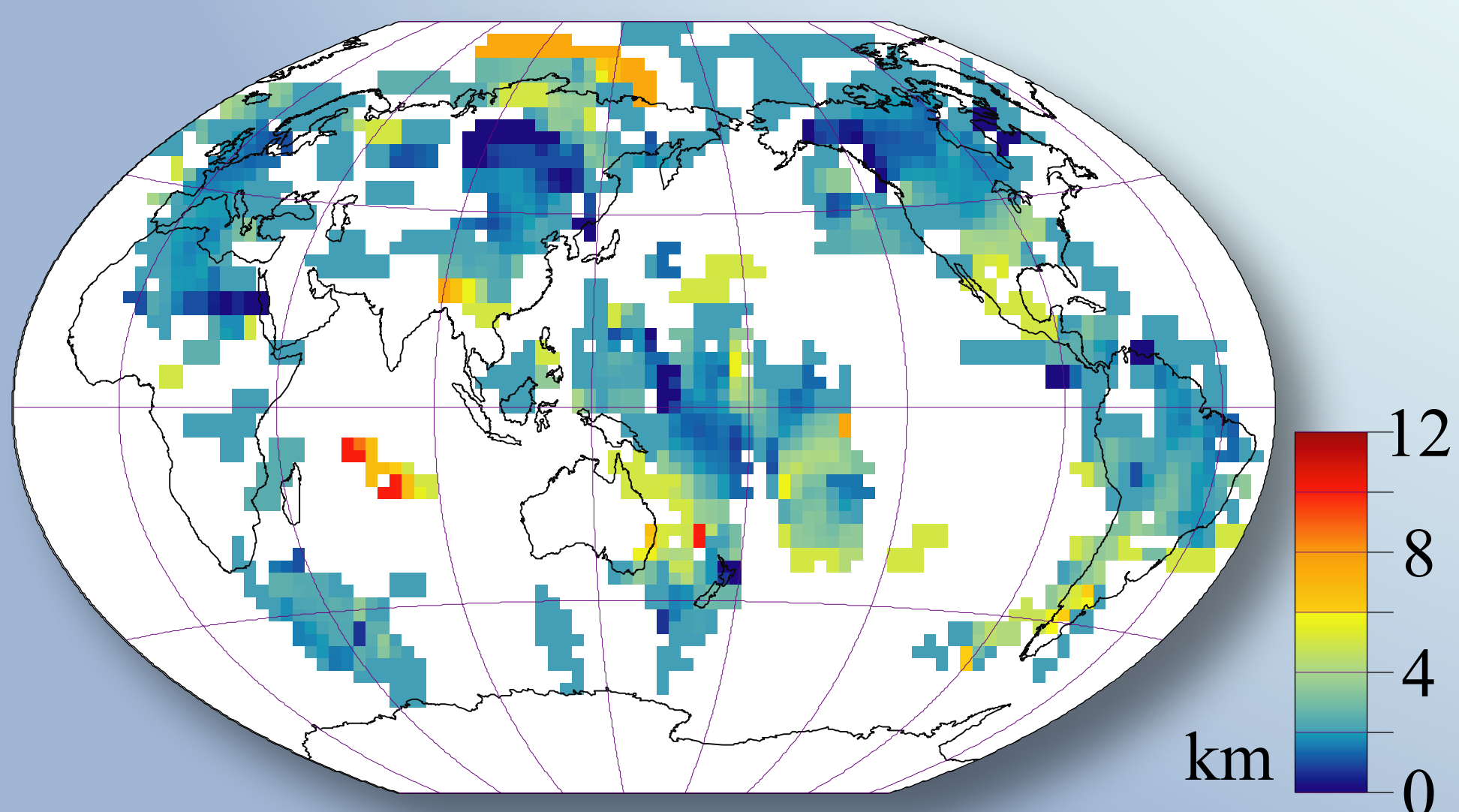
after McNamara and Zhong [Nature, 2005]

Seismically derived D" density anomalies



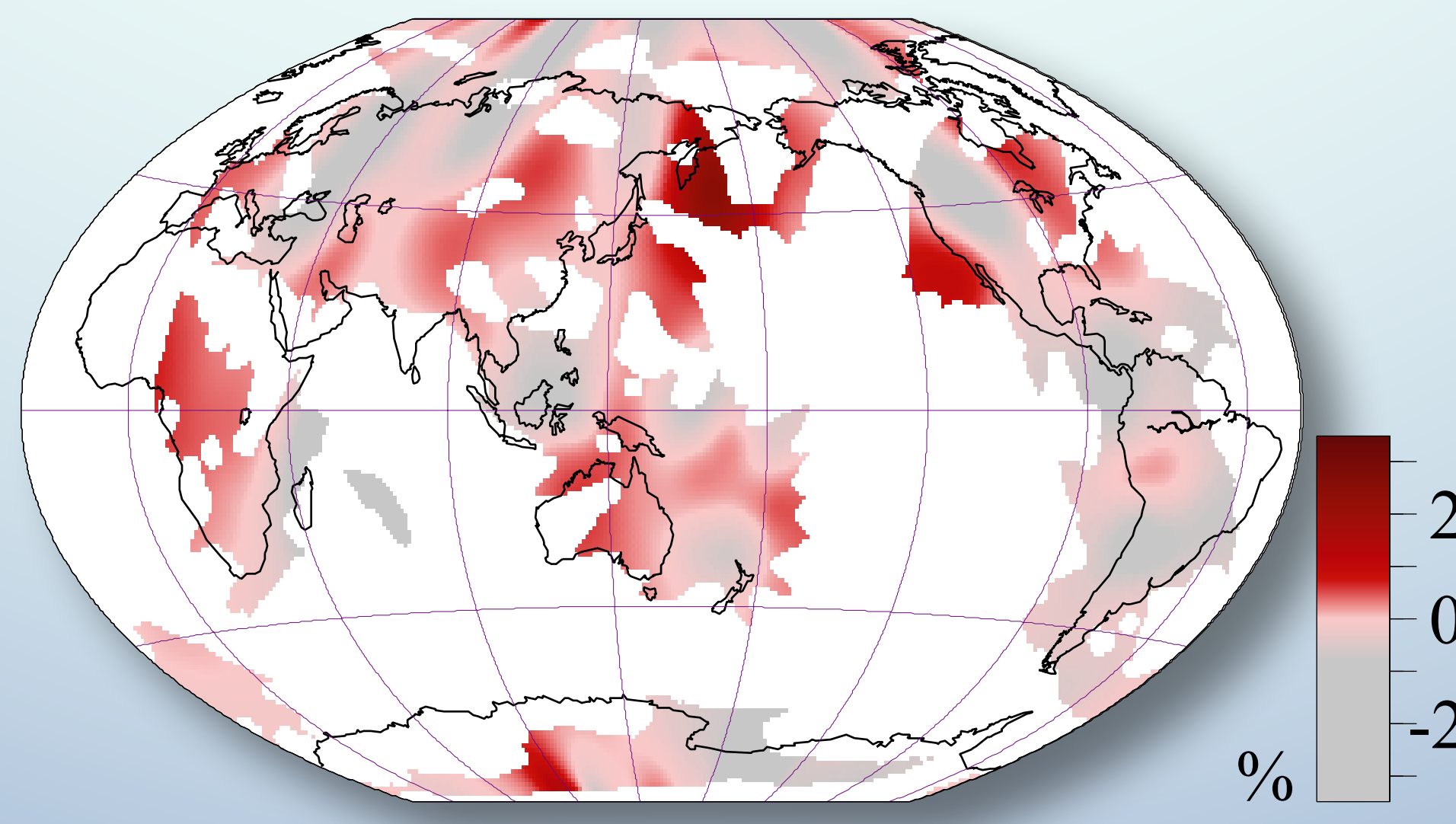
after Trampert et al. [Science, 2004]

ULVZ thickness



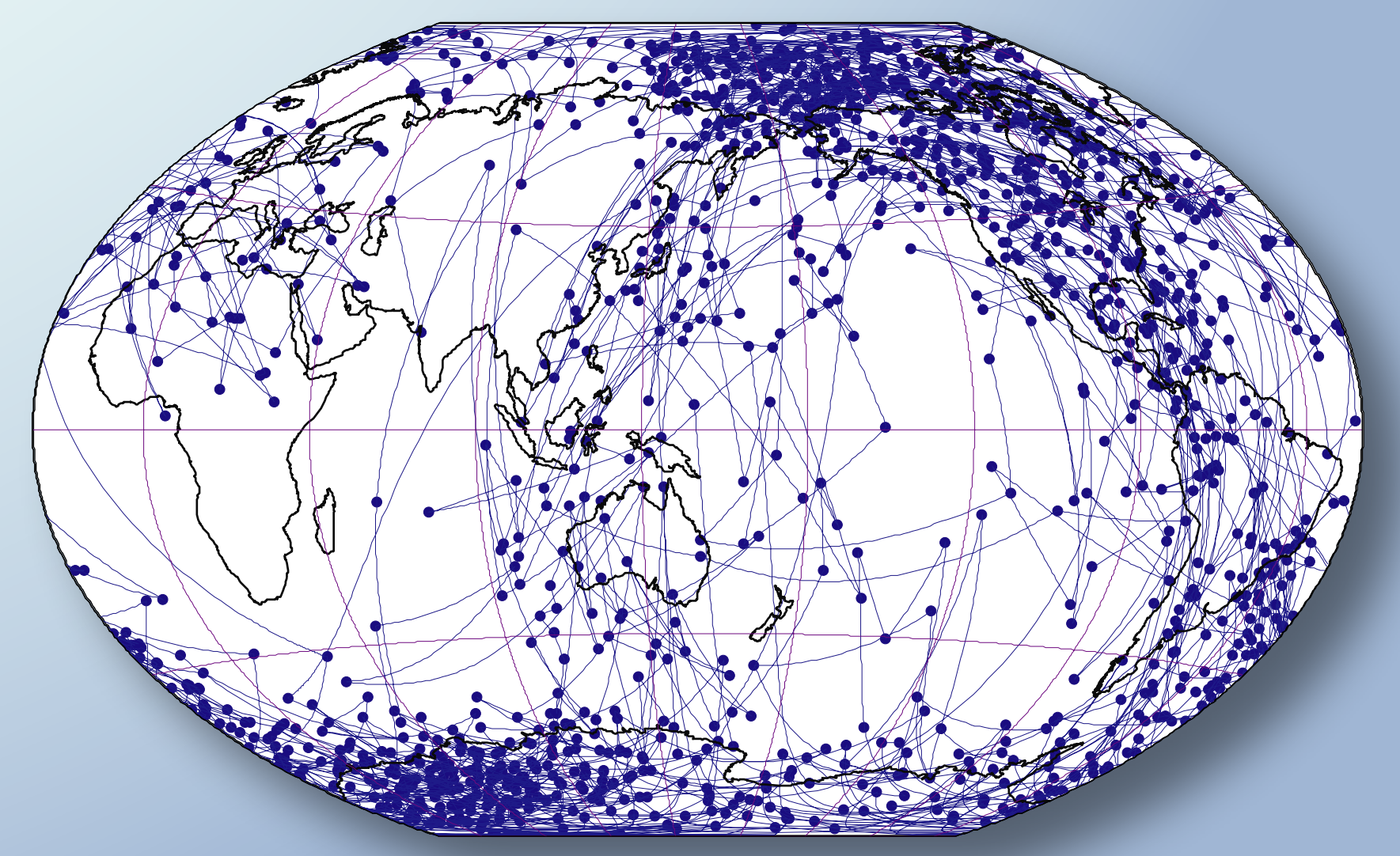
after Thorne and Garnero [JGR, 2004]

D"/CMB PKP scattering intensity



after Hedlin and Shearer [JGR, 2000]

Paleomagnetic VGP reversal paths



after Laj et al. [Nature, 1991]