

## **Online Supplementary Material for:**

The role of megacontinents in the supercontinent cycle

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### **This PDF includes:**

Supplementary figure Fig. DR1

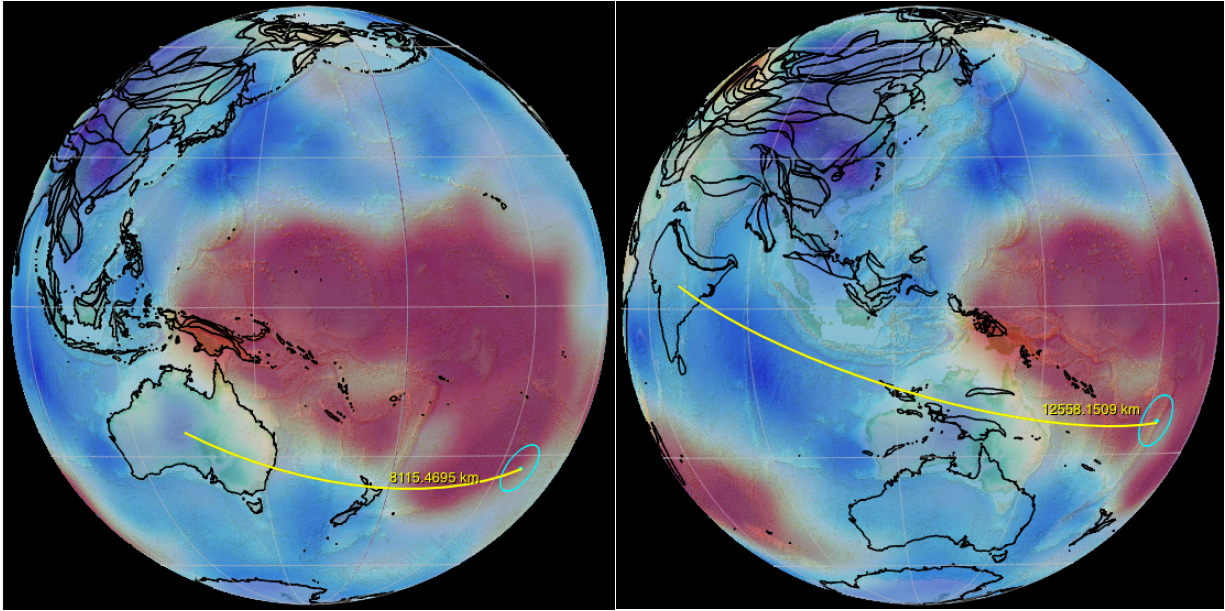


Figure DR1. Distance of continents from their Euler poles of rotation in the assembly of Eurasia. Continental plate motion driven by northward subduction. (Left) Australia Euler pole is for present-day (DeMets et al., 2010). (Right) India Euler pole is for 47 Ma (prior to collision) (van Hinsbergen et al., 2011). Large low-velocity shear-wave provinces (red and yellow) and circum-supercontinent girdle of mantle downwelling (blue) (Dobrovine et al., 2016). Both Euler poles are located in the Pacific LLSVP and  $113^\circ$  (India) and  $73^\circ$  (Australia) from their respective continents, yielding an average of  $93^\circ$  that indicates meridional subduction along the degree-2 girdle of downwelling.

## REFERENCES

- DeMets, C., Gordon, R. G., and Argus, D. F., 2010, Geologically current plate motions: *Geophysical Journal International*, v. 181, p. 1-80.
- Dobrovine, P. V., Steinberger, B., and Torsvik, T. H., 2016, A failure to reject: Testing the correlation between large igneous provinces and deep mantle structures with EDF statistics: *Geochemistry Geophysics Geosystems*, v. 17, p. 1130-1163.
- van Hinsbergen, D. J. J., Steinberger, B., Dobrovine, P. V., and Gassmöller, R., 2011, Acceleration and deceleration of India–Asia convergence since the Cretaceous: Roles of mantle plumes and continental collision: *Journal of Geophysical Research*, v. 116, p. B06101.