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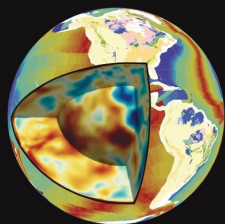
Supercontinent Cycles Through Earth History

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Edited by Z.X. Li, D.A.D. Evans and J.B. Murphy



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The supercontinent-cycle hypothesis attributes planetary-scale episodic tectonic events to an intrinsic self-organizing mode of mantle convection, governed by the buoyancy of continental lithosphere that resists subduction during the closure of old ocean basins, and the consequent reorganization of mantle convection cells leading to the opening of new ocean basins. Characteristic timescales of the cycle are typically 500 to 700 million years. Proposed spatial patterns of cyclicity range from hemispheric (introversion) to antipodal (extroversion), to precisely between those end members (orthoversion). Advances in our understanding can arise from theoretical or numerical modelling, primary data acquisition relevant to continental reconstructions, and spatiotemporal correlations between plate kinematics, geodynamic events and palaeoenvironmental history. The palaeogeographic record of supercontinental tectonics on Earth is still under development. The contributions in this Special Publication provide snapshots in time of these investigations and indicate that Earth's palaeogeographic record incorporates elements of all three end-member spatial patterns.

EVANS, D. A. D., LI, Z. X. & MURPHY, J. B. Four-dimensional context of Earth's supercontinents

KILIAN, T. M., BLEEKER, W., CHAMBERLAIN, K., EVANS, D. A. D. & COUSENS, B. P. Palaeomagnetism, geochronology and geochemistry of the Palaeoproterozoic Rabbit Creek and Powder River dyke swarms: implications for Wyoming in supercraton Superia

BETTS, P. G., ARMIT, R. J., STEWART, J., AITKEN, A. R. A., AILLERES, L., DONCHAK, P., HUTTON, L., WITHNALL, I. & GILES, D. Australia and Nuna

PEHRSSON, S. J., EGLINGTON, B. M., EVANS, D. A. D., HUSTON, D. & REDDY, S. M. Metallogeny and its link to orogenic style during the Nuna supercontinent cycle

SALMINEN, J. M., KLEIN, R., MERTANEN, S., PESONEN, L. J., FRÖJDÖ, S., MÄNTTÄRI, I. & EKLUND, O. Palaeomagnetism

and U–Pb geochronology of c.1570 Ma intrusives from Åland archipelago, SW Finland – Implications for Nuna

PANZIK, J. E., EVANS, D. A. D., KASBOHM, J. J., HANSON, R., GOSE, W. & DESORMEAU, J. Using palaeomagnetism to determine late Mesoproterozoic palaeogeographic history and tectonic relations of the Sinclair terrane, Namaqua orogen, Namibia

KASBOHM, J., EVANS, D. A. D., PANZIK, J. E., HOFMANN, M. & LINNEMANN, U. Palaeomagnetic and geochronological data from Late Mesoproterozoic redbed sedimentary rocks on the western margin of Kalahari craton

EVANS, D. A. D., TRINDADE, R. I. F., CATELANI, E. L., D'AGRELLA-FILHO, M. S., HEAMAN, L. M., OLIVEIRA, E. P., SÖDERLUND, U., ERNST, R. E., SMIRNOV, A. V. & SALMINEN, J. M. Return to Rodinia? Moderate to high palaeolatitude of the São Francisco/Congo craton at 920 Ma

NIU, J., LI, Z.-X. & ZHU, W.

Palaeomagnetism and geochronology of mid-Neoproterozoic Yanbian dykes, South China: implications for a c. 820–800 Ma true polar wander event and the reconstruction of Rodinia

SMITH, E. F., MACDONALD, F. A., CROWLEY, J. L., HODGIN, E. B. & SCHRAG, D. P. Tectonostratigraphic evolution of the c. 780–730 Ma Beck Spring Dolomite: Basin Formation in the core of Rodinia

MURPHY, J. B., BRAID, J. A., QUESADA, C., DAHN, D., GLADNEY, E. & DUPUIS, N. An eastern Mediterranean analogue for the Late Palaeozoic evolution of the Pangaean suture zone in SW Iberia

KEPPIE, F. How subduction broke up Pangaia with implications for the supercontinent cycle

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Supercontinent Cycles Through Earth History

EDITED BY

Z. X. LI

Curtin University, Australia

D. A. D. EVANS

Yale University, USA

and

J. B. MURPHY

St. Francis Xavier University, Canada

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