GAC-MAC London 2021

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Exploring Geosciences Through Time and Space

Explorer les géosciences à travers le temps et l'espace

SS-20 Secular evolution of the Earth's paleogeography, geodynamic processes and geodynamo

Convenors: Phil J.A. McCausland (Western University), Zheng Gong (Yale University)

Supercontinent cycles reflect the long-term cycling and growth of the Earth's continental lithosphere with the mantle as a source region and a sink, primarily for oceanic lithosphere. This cycling takes place within a context of long term secular evolution of the Earth, for instance to become cooler over time. This session calls for contributions of new observations, syntheses, theory and modelling that can refine constraints on Precambrian and Phanerozoic geodynamic processes, and how they may have changed over the history of the Earth. Such contributions could include paleogeography and paleogeographic cycles, the evolution of dominant geodynamic processes such as mantle (un)mixing, plume interactions with the core mantle boundary and the lithosphere, true polar wander, and the evolution of the Earth's thermal regime, including geodynamo evolution. Exploration of the linkages between these Solid Earth systems with paleoclimate, volatiles and the biosphere are also welcome.

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