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## TECTONIC EVOLUTION OF THE LIMPOPO BELT: CONSTRAINTS FROM MANGNETOTELLURIC DATA

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Despite many years of work, a convincing evolutionary model for the Limpopo belt and its geometrical relation to the surrounding cratons is still elusive. This is partly due to the complex nature of the crust and upper mantle structure, the significance of anatectic events and multiple high-grade metamorphic overprints. We use deep probing magnetotelluric data acquired along three profiles crossing the Kaapvaal craton and the Limpopo belt to investigate the crust and upper mantle lithospheric structure between these two tectonic blocks. The 20-30 km wide composite Sunnyside-Palala-Tshipise-Shear zone is imaged in depth for the first time as a sub-vertical conductive structure that marks a fundamental tectonic divide interpreted here to represent a collisional suture between the Kaapvaal and Zimbabwe Cratons. The upper crust in the Kaapvaal Craton and the South Marginal Zone comprises resistive granitoids and granite-greenstone lithologies. Integrating the magnetotelluric, seismic and metamorphic data, we propose a new tectonic model that involves the collision of the Kaapvaal and Zimbabwe cratons circa 2.6 Ga, resulting in high-grade granulite Limpopo lithologies. This evolutionary path does not require a separate terrane status for each of the Limpopo zones, as has been previously suggested.