

Differences in crustal ages between the Tula and Scott Mountains of Enderby Land, East Antarctica

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The Napier Complex of Enderby and Kemp Lands, East Antarctica, consists predominantly of granulites metamorphosed during *ca.* 2.8 Ga high-temperature and *ca.* 2.5 Ga ultra-high temperature (UHT) events [1]. Recent work [2] has recognized two crustal domains in the Tula Mountains in the western part of the Napier Complex, based on Eoarchean (3.9–3.6 Ga) *versus* Mesoarchean (3.2–2.8 Ga) crust with possibly independent geological histories before *ca.* 2.5 Ga. However, other parts of the Napier Complex, including the Scott Mountains farther south, are largely undated. In this study four samples from the Scott Mountains were dated that contain igneous zircon that provides evidence of magmatism at 2.74–2.72 Ga and 2.56–2.52 Ga, and metamorphism at 2.53–2.43. The 2.7 Ga event is slightly younger than the *ca.* 2.8 Ga magmatism and metamorphism seen in the Tula Mountains, and may represent a separate domain of crustal growth. If this is the case, the Napier Complex has assembled crust formed in episodes over most of the Archean. Such a diverse and extensive history has been recognized in other Archean cratons, in India, China and Greenland.

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[1] Harley et al., 2019. Ancient Antarctica: The Archean of the East Antarctic Shield. In: *Earth's Oldest Rocks (Second Edition)*, Elsevier.

[2] Król et al., 2020. Diversity of Archean crust in the eastern Tula Mountains, Napier Complex, East Antarctica. *Gondwana Research*, doi:org/10.1016/j.gr.2019.12.014