



## **Paleomagnetism of the 1210 Ma Gnowangerup–Fraser dyke swarm, Western Australia**

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The Gnowangerup–Fraser mafic dyke swarm is part of the Marnda Moorn LIP and subparallel to the southern and southeastern margins of the Yilgarn Craton. Some dykes become progressively recrystallized towards the craton margin and others are strongly deformed within the orogen, implying that at least some dykes were emplaced prior to the youngest deformation in the Albany–Fraser Orogen. Five dykes have previously yielded U–Pb ages between 1203 and 1218 Ma, and the primary nature of the magnetic directions in a 1212 Ma Fraser dyke is supported by a positive baked-contact test. We collected paleomagnetism samples from 19 dykes, along the Phillips and Fitzgerald Rivers, and near Ravensthorpe. AF demagnetisation revealed a stable bipolar remanence in 13 dykes. The mean paleomagnetic pole is almost identical to the VGP of the 1212 Ma Fraser dyke. The combined robust paleopole places the West Australian Craton in a near-polar position at 1210 Ma. Comparison with coeval Laurentian paleopoles indicates that Laurentia and Australia were widely separated at that time.