

北中国クラトンから得た原生代中期の古地磁気極

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A Mesoproterozoic paleomagnetic pole from 1.32 Ga sills in the North China Craton

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The Paleo-Mesoproterozoic super continent Columbia including the north China Craton is believed to have been exist between ~1800 Ma and ~1500 Ma (e.g. Zhao et al., 2004). The purpose of this study is to make paleomagnetic constraints to reveal the behavior of North China Craton (NCC) during the break-up of Columbia.

We report a Mesoproterozoic paleomagnetic pole position from the diabase sills from northern NCC. We have conducted paleomagnetic and rock magnetic measurements on ten sills in the Mesoproterozoic Xiamaling Formation near Chendge, northeast of China. An U-Pb age of 1320 +/- 6 Ma have been reported from the sills (Li et al., 2009). Paleointensity results with basic paleomagnetic and rock magnetic experiment results had been reported in 2014 SGEPS meeting.

The characteristic high temperature components are obtained from five sites, one of which indicates reversed polarity. The mean direction is $D=-8.3^\circ$ and $I=-3.1^\circ$ ($\alpha_{95}=33.7^\circ$) after tilt correction. This direction has passed fold test and baked contact test, indicating the primary origin of the high temperature component. The corresponding paleomagnetic pole is positioned at 349.8°E and 47.6°N ($A_{95}=24.4^\circ$). This 1.32Ga pole lies between 1.35Ga pole (Chen et al., 1350) and 1.27Ga pole (Zhang et al., 1270Ma). The APWP indicates that the NCC has been located within low latitudes during this period.