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南アフリカ・Vredefort 構造におけるグラノファイヤ岩脈と母岩の境界の発見と古地磁気
Paleomagnetism of a lithological contact of granophyre dikes with bedrock granites at Vredefort dome, South Africa

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The Vredefort dome is known as the largest and oldest (2023 ± 4 Ma) terrestrial impact structures, which is the deeply-exhumed remanent of the central uplift zone (~10km) of an originally ca. 250-km diameter crater. The Vredefort impact structure contains a suite of granophyric dykes, referred to as the Vredefort Granophyre, occurring within and at the edge of the Archaean basement core. This unique melt rock occurs as vertical ring dikes along the contact between sedimentary collar and core of Archaean granites, and as vertical dikes extending northwest-southeast and northeast-southwest in the granitic core. Although there have been a lot of mineralogical and isotopic studies, the lithological contact has not been observed due to the lack of the outcrop. During our field survey, we found the lithological contact of the Vredefort granophyre with bedrock granites near the Kopjeskraal Country Lodge, Vredefort, South Africa. In this presentation, we report the presence of a distinct chilled margin from a cooperative study of petrology and rock magnetism of the contact and also a micro-paleomagnetic consideration across a transection of the chilled margin.