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Multi-component magnetization of the Hosokawa-dani rhyolite around the Gauss-Matuyama chronozone boundary

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The garnet-bearing dykes of Hosokawa-dani rhyolite with 2.3 -2.5 Ma K-Ar ages intrudes a green schist of the Tanzawa Group, west Tanzawa Mountains, central Japan. The Hosokawa-dani rhyolite was correlated to garnet-bearing pumiceous tephra beds in lowest Pleistocene around south Kanto Plain. Paleomagnetic and rock magnetic measurements revealed that the Hosokawa-dani rhyolite shows primary normal and secondary reversed magnetization components carried by magnetite in Gauss Chron and maghemite in Matuyama Chron, respectively. Primary reversed magnetization component was found from a silt layer immediately beneath the Mk19 tephra bed in the Nakatsu Group. Such paleomagnetic polarity indicates no correlation between the Hosokawa-dani rhyolite and Mk19 tephra bed. Proximal area of the earliest Pleistocene garnet-bearing pumiceous tephra beds is unknown.

Keywords: Gauss-Matuyama chronozone boundary, secondary magnetization, maghemite, Hosokawadani rhyolite, correlation of dyke and distal tephra, Tanzawa Mountains