

Archeomagnetic Study of Kilns in Kyushu District

by

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(Received September 30, 1972)

The present author has carried out the archeomagnetic investigation of 9 kilns distributed in Saga, Nagasaki, Kumamoto and Kagoshima Prefectures of Kyushu district and obtained some new data in addition to the previous one (1972). The results are shown as follows. The sampling sites are shown in Fig. 1.

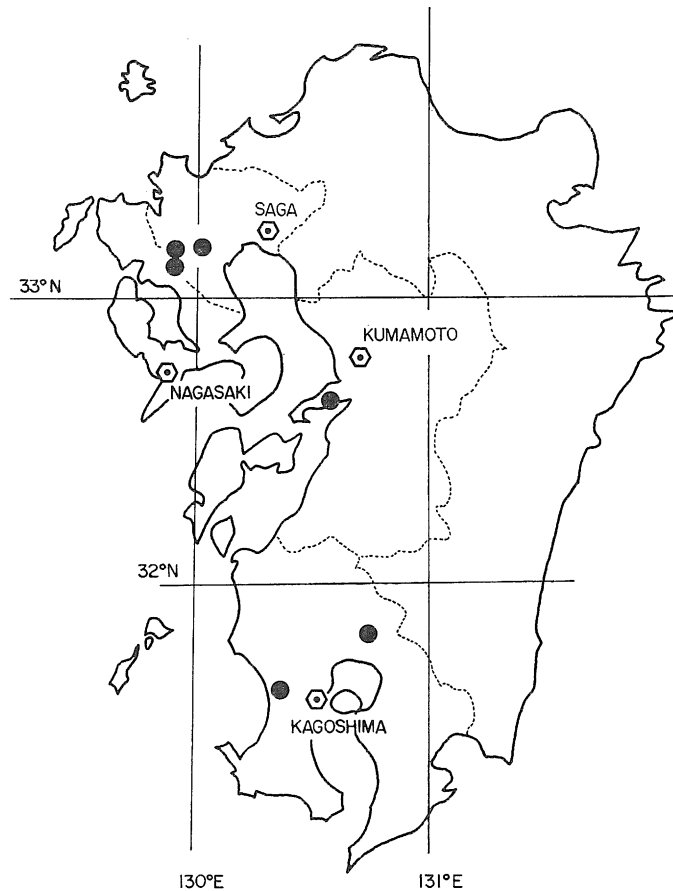


Fig. 1. Map of sampling sites

Table. 1

Site name	Locality	Age	D	I	θ_{95}	K
Ryumonji	Kajiki-cho Kagoshima	1955 A. D.	$-8^{\circ}25'$ ($-8^{\circ}17'$)	$43^{\circ}03'$ ($46^{\circ}35'$)	$2^{\circ}30'$	561
Naeshirogawa	Izyuin-cho Kagoshima	1950 ± 15	$-14^{\circ}52'$ ($-14^{\circ}45'$)	$43^{\circ}24'$ ($46^{\circ}27'$)	$5^{\circ}50'$	206
Shiigamine	Nishiarita-cho Saga	1880	$-8^{\circ}18'$ ($-8^{\circ}04'$)	$49^{\circ}21'$ ($50^{\circ}59'$)	$8^{\circ}00'$	49
Moudasarayama	Udo-Shi Kumamoto	1800 ± 15	$-15^{\circ}41'$ ($-16^{\circ}17'$)	$47^{\circ}56'$ ($49^{\circ}01'$)	$2^{\circ}30'$	351
Mukaenohara	Nishiarita-cho Saga	1650 ± 15	$2^{\circ}25'$ ($3^{\circ}16'$)	$39^{\circ}58'$ ($42^{\circ}38'$)	$6^{\circ}30'$	53
Kakenotani	Arita-cho Saga	1640 ± 15	$4^{\circ}45'$ ($6^{\circ}05'$)	$30^{\circ}16'$ ($33^{\circ}39'$)	$5^{\circ}30'$	82
Yoshinomoto	Arita-cho Saga	1620 ± 15	$8^{\circ}24'$ ($8^{\circ}46'$)	$50^{\circ}04'$ ($52^{\circ}36'$)	$6^{\circ}30'$	58
Hatanohara	Hasami-cho Nagasaki	1600 ± 15	$-1^{\circ}44'$ ($-0^{\circ}36'$)	$34^{\circ}57'$ ($35^{\circ}42'$)	$5^{\circ}30'$	79
Sabitani	Takeo-shi Saga	1600 ± 15	$-5^{\circ}48'$ ($-5^{\circ}34'$)	$47^{\circ}46'$ ($49^{\circ}32'$)	$8^{\circ}00'$	40

D, I : Declination and Inclination.

The value shown in a bracket has been reduced from each sampling site to Kyoto under the assumption of an axial dipole.

θ_{95} : Fisher's circle of confidence ($P=0.05$).

K : Precision parameter.

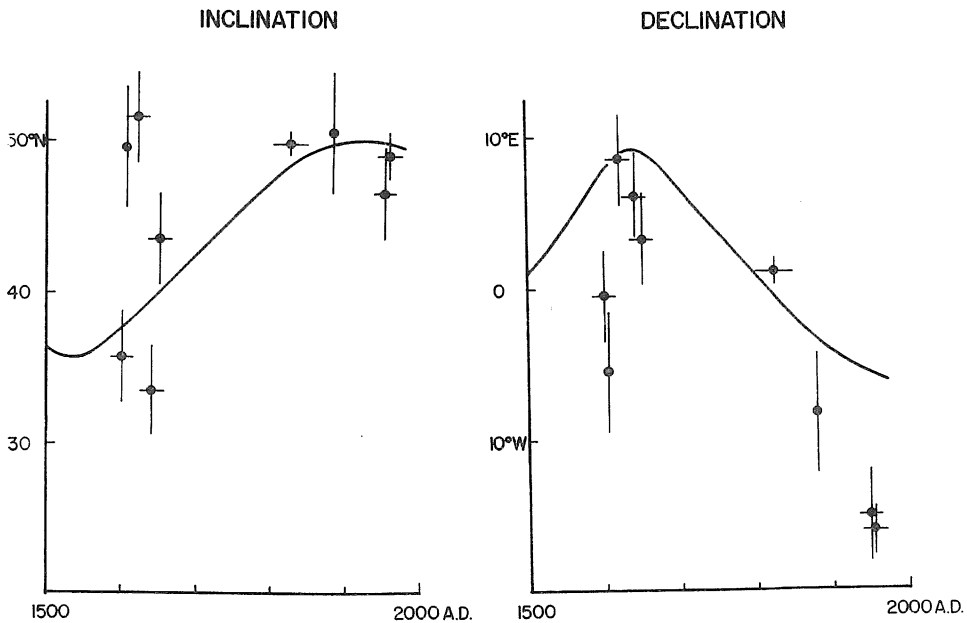


Fig. 2.

The techniques of sampling and measurement were already reported in the previous paper (1972). The ages of the kilns in this district are mainly estimated from historical record or tradition rather than archeological cultural analysis. The new archeomagnetic data are summarised in Table (1) and shown in Fig. 2 together with the reference curves, showing the observed geomagnetic secular variation, which have been established by Hirooka (1971). The virtual pole position are shown in Fig. 3.

VIRTUAL POLE POSITION

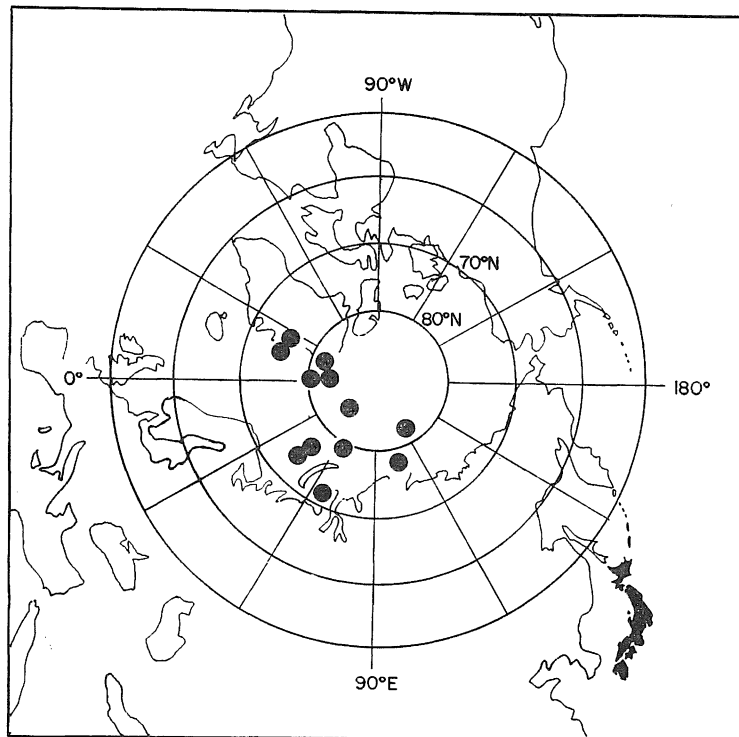


Fig. 3.

References

- (1) Asami, E., Tokieda, K and Kishi, T ; Archeomagnetic study of kilns in San-in and Kyushu, Japan ; Mem. Fac. Lit. & Sci. Shimane Univ., Nat. Sci., 5, pp. 18-22, 1972.
- (2) Hirooka, K. ; Archeomagnetic study in southwest Japan ; Ph. D. Thesis., Dept. of Geol., Kyoto Univ., 1971.