Lists of Archeomagnetic and Paleomagnetic Results

— 1950–1970, in Japan —

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(Received August 3, 1970)

Abstract

All the data of paleomagnetic and archeomagnetic studies made in these two decades in Japan are presented as three tables. Two of them give the paleomagnetic and archeomagnetic direction studies and the other table gives results of intensity studies from the recent to the geological past.

1. Introduction

A vast number of data of the paleomagnetism and the archeomagnetism has recently been accumulated in Japan. Though some of them are already tabulated, many data has been presented in various manner and not in the same criteria, some are based on detailed studies of numerous samples from rock units of well defined geological age whereas others are based on a preliminary studies and with unknown geological age. It is shown through the present tabulation how large is the diversity among presented data. The present collection is the first trial and, therefore, any ambiguous values in the table would be corrected with the aid of authors referred in the last column of each table.

2. Archeomagnetic and Paleomagnetic Intensity (Table 1 page, 3-6)

Geomagnetic intensity data of the past are not many, therefore, all the data are arranged in one table. Age of the specimen is expressed in year AD, whereas a small part of materials of geological past is clasified by geological period and its age is given by million years (my) before present (BP).

The table contains 7 columns.

Column 1 gives age or geological period of studied materials. Methods of age determination are noted in column 6 as will be mentioned below.

Column 2 gives the name and the kind of materials and the location of the specimens specified by district and prefecture where possible. In many cases it is not possible to know exact location from the reference and only the name of the materials is noted.

Column 3 gives the number of specimens studied.

Column 4 gives the experimental value of F/F_0 where F_0 denotes the total force of the pre-

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sent geomagnetic field and F means the total force of the past geomagnetic field at the time and location of formation of (thermo-) natural remanent magnetization.

Column 5 gives the absolute intensity of the virtual geomagnetic dipole moment (CGS·cm³) at assigned age of the specimen. In many cases, however, the value is not shown according to the lack of original data in the references.

Column 6 gives the remarks where needed. Methods of age determination are noticed as follows; C14-carbon fourteen method. G-geological estimation. KA-potassium argon method. H-historical description.

Column 7 gives the number of references attached on its end.

3. Archeomagnetic Direction Data (Table 2, Page 7~15)

Column 1 gives the age of used materials in AD. Negative value corresponds to the age of BC. In some cases where the age are shown as x - y , the definite age including any ambiguities is not given by referred authors and, hence, the present author has read them from the tables or figures in the references.

Column 2 gives the materials studied and locations of specimens specified by district and prefecture where possible.

Column 3 (N) gives the number of specimens studied.

Column 4 (I) gives the inclination of the natural remanent magnetization of the specimens in units of degree where the positive value corresponds to the downward dipping vectors from the horizontal plane.

Column 5 (D) gives the declinations in units of degree with positive sign for clockwise rotation from the geographic north.

Column 6 (α_{95}) gives the conical angle of the Fisher's 95% confidence circle. (Ref. 18)

Column 7 (k) gives the convergence factor of the unit vector of the natural remanent magnetization defined by Fisher.

Column 8 (VPP) gives the geographic position of the geomagnetic virtual dipole moment. *Lat.* is the geographic latitude expressed in units of degree with the positive value towards the north pole and the negative value towards the south pole. *Long.* is the geographic longitude with positive value for east-ward rotation.

Column 9 gives the remarks and the supplements to the magnetic data. NRM denotes that the magnetic data are only based upon natural remanent magnetization. A-natural remanent magnetization after ac field cleaning where -?- means that the peak ac field is not available at the present. *-magnetic data are reduced to the geomagnetic field at Tokyo. **-magnetic data are reduced to the geomagnetic field at 138°E and 37°N (observatory in Japan). C14-dated by carbon fourteen method. Data without *, ** or C14 denote that the natural remanent magnetization are not corrected and dating was made by historical descriptions, types of associated potteries and/or geological key beds of known age. **Column 10** gives the number of the reference in the same manner as column 7 of the intensity data.

4. Paleomagnetic Direction Data (Table 3, page 16~39)

Data of paleomagnetic studies are available up to middle paleozoic period (Devonian). Magnetic data are arranged starting from recent rock units to the geological past. In the first place rocks of formations are classified in order of geological periods. The estimation of the age for rock units from geological view point shows wide varieties, for instance, some rock units are identified as of Tertiary period and others are as of upper Miocene time. Hence, rock units with larger ambiguity in its age are arranged in lower rows in the present table. The table contains 11 columns.

Column 1 gives ages of a rock units of year AD only for four cases with known age and in units of million years (BP) for all other cases. From **column 2** to **column 7**, the explanation is the same as for the archeomagnetic direction data.

Column 8 (*P*) gives the polarity of natural remanent magnetization. Obviously northward pointing and downward dipping unit vectors of the natural remanent magnetization are assigned as +, vectors with opposite direction are indicated by - and others with unidentifiable polarity are shown with M.

Column 9 (VPP) corresponds to the **column 8** in the archeomagnetic direction data.

Column 10 gives the remarks and supplements to the magnetic data. NRM indicates that the paleomagnetic data are obtained only from natural remanent magnetization. INT-the intensity data are available. Qn-the Königsberger's ratio. Ax-all the sample studied are demagnetized in the ac magnetic field with peak field x (Oe). A-? - peak ac field is not available TDx-thermal demagnetization for all the specimens studied up to x degrees in centigrade in a nonmagnetic space. No Mht.-specimens containing maghemite (γ -Fe₂O₃ phase) are rejected. KA-age determinations were made through potassium argon method. ST-any kind of stability test is carried out for all the specimen. General trend removed-the standard regional magnetic anomaly is subtracted from the observed total force of the geomagnetic field obtained through survey.

Column 11 gives the number of referred papers in the same manner as before.

Table 1. Archeomagnetic and Paleomagnetic Intensity Data (page 3~6)

Age (AD)	Site and Materials	<i>N</i>	F/F_0	VDM($\times 10^{23}$ CGS)	Remarks	References
1962	Basalt, Miyakejima	5	1.02	—	H	45
1951	" , Ōshima,	6	1.12	—	H	"
1783	" , Asama Volcano	6	1.15	—	H	"
1780 $\pm$ 5	Andesite, Sakurajima	1	1.11	—	H	78, 81
1778	Basalt, Sakurajima	5	1.20 $\pm$ 0.06	—	H	59
1552	" , "	4	1.20 $\pm$ 0.02	—	H	"
1281	Basalt, Asama Volcano	3	1.24	—	H	45
1250 $\pm$ 80	Baked earth, Toyota	4	1.23 $\pm$ 0.01	—	H	78, 81
1470 $\pm$ 5	Andesite, Sakurajima	1	1.24	—	H	" , "
1421	Basalt, Sakurajima	6	1.33 $\pm$ 0.08	—	H	59
1300 $\pm$ 30	" , Sakurajima	4	1.09 $\pm$ 0.07	—	H	"
1120 $\pm$ 20	Baked earth, Seto	4	1.26 $\pm$ 0.02	—		78, 81
1070 $\pm$ 70	Basalt, Seto	4	1.02 $\pm$ 0.05	—		59

Age (AD)	Site and Materials	N	F/F_0	VDM($\times 10^{25}$ CGS)	Remarks	References
1000 $\pm$ 20	Baked earth, Seto	4	1.45 $\pm$ 0.03	—		78, 81
650 $\pm$ 50	" , Sakai	2	1.48 $\pm$ 0.01	—		" , "
950 $\pm$ 50	" , "	2	1.40 $\pm$ 0.19	—		" , "
920 $\pm$ 20	" , Seto					
765 $\pm$ 15	Tile, Seto	4	1.08 $\pm$ 0.03	—		59
735 $\pm$ 15	Tile, Seto	3	1.05 $\pm$ 0.03	—		"
725 $\pm$ 25	Tile, Sakai	5	1.43 $\pm$ 0.04	—		78, 81
710 $\pm$ 60	Baked earth, Sakai	3	1.21 $\pm$ 0.06	—		" , "
565 $\pm$ 15	Pottery, Sakai	4	1.14 $\pm$ 0.03	—		59
550 $\pm$ 20	Baked earth, Sakai	5	1.46 $\pm$ 0.03	—		78, 81
540 $\pm$ 40						
525 $\pm$ 10	Pottery, Sakai	8	1.37 $\pm$ 0.03	—		59
480 $\pm$ 20	Baked earth, Tsu	3	1.44 $\pm$ 0.06	—		78, 81
380 $\pm$ 20	Clay Idol, Ueno	2	1.35 $\pm$ 0.09	—		" , "
300 $\pm$ 100	Basalt, Ueno	5	1.53 $\pm$ 0.13	—		59
220 $\pm$ 20	Pottery, Hiraoka	2	1.41 $\pm$ 0.01	—		78, 81
100 $\pm$ 50	" , Fukuoka	1	1.43	—		" , "
-100 $\pm$ 50	" , Daitō	1	1.64	—		" , "
-150 $\pm$ 150	Basalt, Daitō	2	1.54 $\pm$ 0.01	—		60
-300 $\pm$ 250	" , "	4	1.22 $\pm$ 0.07	—		"
-530	Pottery, Araumi, East Japan	1	1.45	—		36
"	" , " , " , "	1	1.16	—		"
-900 $\pm$ 100	Pottery, Shiga	2	0.93 $\pm$ 0.01	—		78, 81
-1000 $\pm$ 400	Basalt, Shiga	1	1.00	—		59
-1030	Pottery, Furuhashi, East Japan	1	0.88	—		36
"	" , " , " , "	1	1.01	—		"
"	" , " , " , "	1	1.19	—		"
"	" , Takeda, "	1	0.42	—		"
"	" , " , " , "	1	0.68	—		"
"	" , " , " , "	1	0.82	—		"
"	" , " , " , "	1	0.74	—		"
"	Pottery, Sugimoto, East Japan	1	0.86	—		"
"	" , " , " , "	1	1.01	—		"
"	" , " , " , "	1	1.54	—		"
"	" , " , " , "	1	1.40	—		"
"	" , " , " , "	1	0.68	—		"
"	" , " , " , "	1	1.49	—		"
-2000 $\pm$ 500	Basalt, " , "	1	0.94	—	C14	"
-2000	" , Asama Volcano	3	1.83	—	"	"
-2330	Pottery, Mukōdai, East Japan	1	0.56	—	"	"
"	" , " , " , "	1	0.70	—	"	"
"	" , " , " , "	1	0.67	—	"	"
-2470	" , Atamadai, "	1	0.64	—	"	"
"	" , " , " , "	1	0.65	—	"	"
"	" , " , " , "	1	0.66	—	"	"

Age (AD)	Site and Materials	N	F/F_0	(VDM $\times 10^{25}$ CGS)	Remarks	References
-2470	Pottery, Atamadai, East Japan	1	0.88	—	"	36
-2500 $\pm$ 300	Basalt, " , "	3	0.48 $\pm$ 0.08	—	"	59
-2530	Pottery, Iwatsubo, "	1	0.86	—		36
"	" , " , "	1	0.95	—		"
"	" , " , "	1	1.09	—		"
"	" , " , "	1	0.93	—		"
"	" , Hazama, "	1	0.44	—		"
"	" , " , "	1	0.82	—		"
"	" , " , "	1	0.43	—		"
"	" , " , "	1	1.12	—		"
"	" , " , "	1	0.67	—		"
-2780	" , Orimoto, "	1	0.71	—	C14	"
"	" , " , "	1	0.90	—	"	"
"	" , " , "	1	0.67	—	"	"
"	" , " , "	1	0.65	—	"	"
"	" , " , "	1	0.59	—	"	"
"	" , " , "	1	0.67	—	"	"
"	" , " , "	1	0.58	—	"	"
-3100 $\pm$ 300	Basalt, " , "	1	0.78	—	"	"
-3430	Pottery, Udbō, "	1	0.73	—	"	"
"	" , " , "	1	0.56	—	"	"
"	" , " , "	1	0.54	—	"	"
"	" , " , "	1	0.44	—	"	"
"	" , " , "	1	0.52	—	"	"
-5230	" , Itako, "	1	0.65	—		"
"	" , " , "	1	0.63	—		"
"	" , Minowa, "	1	0.73	—	C14	"
"	" , " , "	1	0.88	—	"	"
"	" , " , "	1	0.64	—	"	"
-6230	" , Nishinojō, "	1	0.64	—	"	"
"	" , " , "	1	0.75	—	"	"
"	" , " , "	1	0.71	—	C14	36
"	" , " , "	1	0.81	—	"	"
"	" , " , "	1	1.34	—	"	"
"	" , " , "	1	1.00	—	"	"
"	" , " , "	1	0.67	—	"	"
"	" , " , "	1	0.66	—	"	"
-7330	" , Natsushima, "	1	0.80	—	"	"
"	" , " , "	1	0.85	—	"	"
"	" , " , "	1	0.60	—	"	"
Pleistocene	Andesite, Hakone Old-somma					
	OSN 1	7	4.00	—	G	45, 60
	OSN 4	9	1.54	12.8	"	" , "
	OSN 6	8	2.35	16.0	"	" , "
	OSN 7	7	1.67	13.7	"	" , "

Age (my.)	Site and Materials	N	F/F ₀	VDM($\times 10^{25}$ CGS)	Remarks	References
Pleistocene	OSN 8	8	2.20	18.7	"	" , "
	OSN 17	7	1.91	15.6	"	" , "
	OSN 18	7	1.73	14.4	"	" , "
	OSN 24	7	0.30	11.5	"	" , "
	Kujū Volcanic Rocks, Kyushu					
	KP	2	—	5.0	"	82, 45
	D4	4	—	10.1	"	" , "
	K7	5	—	9.9	"	" , "
	K4	3	—	11.9	"	" , "
	Dh	4	—	9.5	"	" , "
Pleistocene	Usami Basalt, Izu					
0.71	UV06	5	0.82	5.5	(G)	42, 45
	UV07	7	1.56	13.5	"	" , "
	UV08	5	1.44	12.3	KA	" , " , 22
0.45-0.66	UV09	6	1.00	9.5	(G)	" , "
	UV10	8	1.80	17.4	KA	" , " , 22
	UV11	5	1.10	8.5	(G)	" , "
0.82	UV17	5	1.80	16.8	"	" , "
	UV12	9	1.02	9.3	KA	" , " , 22
	UV13	9	1.17	10.7	(G)	" , "
	UV16	7	0.29	3.0	"	" , "
Pleistocene	UV14	9	0.79	7.2	"	" , " , 22
	Dacite, Minakami-yama	7	1.29	—	G	34
	Andesite, Hotaka, Gumma	2	—	2.5	"	45
Pliocene	Kitamatsuura Basalt, Kyushu					
	KM21	2	0.18, 0.08	mean 1.5	G(KA)	45, 72
	KM23	5	0.78	8.3	"	" , "
	KM52	4	—	8.8	"	" , 74, 72
	KM52	5	—	10.6	"	" , " , "
Pliocene	Kujū Volcanic Rocks, Kyushu					
	H1	1	—	6.3	G	83, 45
	Rw	3	—	6.2	"	" , "
	R1	1	—	8.7	"	" , "
	P1	6	—	8.7	"	" , "
	Tp	3	—	8.4	"	" , "
Neogene	Basaltic Andesite, Shibayama,					
	SF1	1	1.3	—	"	1
	SF1	1	0.4	—	"	"
	Altered Basalt, Shibayama					
	SR1	1	1.5	—	"	"
	SR2	1	1.5	—	"	"
	Andesite, Yashima, YR1	1	0.75	—	"	"
	YR2	1	2.8	—	"	"
	YR2	1	0.8	—	"	"
	Altered Andesite Shiroyama					
	KR1	1	0.8	—	"	"

Table 2. Archeomagnetic Direction Data

Age (AD)	Site and Materials	<i>N</i>	<i>I</i>	<i>D</i>	α_{95}	<i>k</i>	Remarks	References
1950	Basalt, Ōshima, Izu,	9	49.7	-7.6	5.4	91.3	A-?-	31
1780±2	Lava, Sakurajima, Kagoshima pref.	8	51.5	-14.5	7.0	88.7	"	"
1777	Basalt, Ōshima, Izu	18	40.2	-7.2	3.7	88.9	"	"
1684	" , " , "	9	35.5	5.0	4.5	—	NRM, *	98, 100, 101, 102
"	" , " , "	13	42.0	16.5	7.4	31.9	A-?-	31
1600±30	Baked earth, Nakaide No. 2, Shiga pref.	21	35.4	12.3	3.6	81.4	"	"
1570±30	" , Nakaide No. 1, "	9	33.1	13.0	6.5	63.8	"	"
1552	Basalt, Ōshima, Izu	12	42.1	0.7	4.8	83.0	"	"
"	" , " , "	12	40.0	3.0	5.5	—	NRM, *	98, 100, 101, 102
1550±30	Baked earth, Furōyam W. No. 2, Okayama pref.	32	36.0	8.1	1.7	239.4	A-?-	31
1473±3	Lava, Sakurajima, Bunmei, Kagoshima pref.	22	40.5	-10.0	6.1	26.5	"	"
1421	Basalt, Ōshima, Izu	21	44.3	11.2	3.2	97.4	"	"
"	" , " , "	10	50.5	-4.0	5.1	—	NRM, *	98, 100, 101, 102
1380±50	Baked earth, Ōgai, Shiga pref.	20	41.3	1.0	4.8	47.1	A-?-	31
1350±50	" , Matsuo No. 2, Shiga pref.	14	39.7	4.0	5.2	58.0	"	"
1350±10	" , Magoemon No. 1, Aichi pref.	9	52.0	-8.3	10.4	24.9	"	"
1350±5	" , Matsuo No. 1, Shiga pref.	6	38.1	9.0	4.2	260.6	"	"
1350±20	" , Anayama, Aichi pref.	10	52.0	15.0	4.0	153.1	"	"
1338	Basalt, Ōshima, Izu	31	49.9	7.5	4.2	39.2	A-?-	"
"	" , " , "	6	53.0	6.0	5.4	—	NRM, *	98, 100, 101, 102
1330±10	Baked earth, Magoemon No. 2, Aichi pref	14	55.3	-1.5	7.2	31.3	A-?-	31
1330±30	" , Furōyama W. No. 1, Okayama pref.	27	52.7	13.7	1.6	301.6	"	"
"	" , Furōyama E, Okayama pref.	27	40.6	2.7	2.7	104.9	"	"
"	" , Aigafuchi, S. No. 1, Okayama pref.	16	51.3	2.7	2.5	226.6	"	"
1300±20	" , Fusō-1, Aich pref.	9	50.2	16.3	5.7	82.7	"	"
1280±20	" , Fusō-3, "	6	63.3	12.5	8.0	71.8	"	"
1280±50	" , Seto, Aichi pref.	7	54.0	12.8	4.1	—	NRM, **	27
"	" , " , "	7	63.1	12.4	8.1	—	" , "	28
1260±10	" , Kamiōshidani, Fukui pref.	9	51.6	20.0	9.5	30.5	A-?-	31

Age (AD)	Site and Materials	N	I	D	α_{95}	k	Remarks	References
1220±30	Baked earth, Aigafuchi N., Okayama pref.	17	54.2	2.5	4.2	74.7	A-?-	31
1200-1300	" , Tatsumigaoka, Aichi pref.	8	59.4	2.6	2.7	—	NRM, *	92
"	" , Yamaguchi, Aichi pref.	8	56.4	-1.9	1.7	—	" , "	"
"	" , Tokoname, Aichi pref.	9	56.2	-0.3	0.8	—	" , "	"
1120±10	" , Okayama No. 4, Mie pref.	11	52.1	-11.0	4.9	88.3	A-?-	31
1120±50	" , Nisshin, Aichi pref.	10	51.2	-4.3	5.2	—	NRM, **	27
1100	Tuff, Ōshima, Izu	11	46.2	-5.0	1.1	—	" , *	100, 102
"	" , " , "	48	48.8	0.4	5.0	—	" , "	" , "
1100±50	Basalt, Ōshima, Izu	16	44.2	1.4	4.2	79.1	A-?-	31
1100-1200	Baked earth, Tatsumigaoka, Aichi pref., 1	8	60.4	-10.1	0.9	—	NRM, *	92
"	" , Sanageyama, Aichi pref.	3	56.9	-6.6	2.6	—	" , "	"
"	" , Tatsumigaoka, Aichi pref., 3	6	58.2	-6.6	4.2	—	" , "	"
"	" , " , Aichi pref., 3	5	58.1	-3.0	2.0	—	" , "	"
1040	" , Sanageyama, Aichi pref.	12	48.5	-18.9	1.2	—	" , "	"
1000±20	" , Nisshin, Aichi pref.	10	51.2	-4.3	5.2	—	" , **	28
1000±40	" , Miyoshi, Aichi pref.	9	47.5	-17.5	7.3	—	" , "	27
1000±10	" , O-53, "	10	50.8	-3.8	5.1	89.3	A-?-	31
1000-1100	" , Yamaguchi, Aichi pref., 2	8	55.2	-24.0	3.4	—	NRM, *	92
"	" , Sanageyama, Aichi pref., 2	8	53.0	-25.6	2.7	—	" , "	"
"	" , " , " , 1	6	52.3	-25.1	3.1	—	" , "	"
"	" , " , " , "	10	54.3	-22.1	3.8	—	" , "	"
"	" , " , " , "	9	54.7	-25.3	1.5	—	" , "	"
"	" , Haburo, Okayama pref., 1	7	57.8	20.2	1.6	—	" , "	"
960	Tuff, Ōshima, Izu	9	41.0	-13.1	2.8	—	*	100, 102
950±10	Baked earth, K-14, Aichi pref.	9	47.8	-17.0	7.2	52.3	A-?-	31
950±25	" , Nakaigawara, Hyōgo pref.	31	53.4	-19.8	2.0	169.5	"	"
950±50	" , Sakai, Ōsaka pref.	11	52.2	-19.1	7.6	—	NRM, **	27
920±20	" , Miyoshi, Aichi pref.	6	47.8	-11.3	9.3	—	" , "	"
"	" , Sanageyama, Aichi pref.	12	48.5	-18.9	1.2	—	" , *	92
900-1000	" , Tsutanoki, Iwate pref., 1	10	47.6	-19.2	0.6	—	" , "	"

Age (AD)	Site and Materials	N	I	D	α_{95}	k	Remarks	References
900-1000	Baked earth, Tsutanoki, Iwate pref., 2	9	48.2	-16.6	0.7	—	NRM, *	92
"	" , " , " , 3	9	46.7	-19.1	1.5	—	" , "	"
"	" , " , " , 4	7	47.7	-24.2	4.5	—	" , "	"
"	" , " , " , 5	12	48.0	-18.3	1.1	—	" , "	"
"	" , Kuriu, Tochigi pref., 1	11	46.4	-19.3	2.6	—	" , "	"
"	" , Kawaone, Tokyo 1	13	48.8	-22.0	3.4	—	" , "	"
"	" , Sanageyama, Aichi pref., 2	9	48.9	-20.0	1.5	—	" , "	"
"	" , Sanageyama, Aichi pref., 5	10	45.0	-27.1	7.7	—	" , "	"
860	Tuff, Ōshima, Izu	11	45.8	-11.1	4.7	—	" , "	100, 102
850±50	Baked earth, Kaneiba, Okayama pref.	21	46.3	-14.0	2.1	230.7	A?—	31
810±10	" , MT-83, Ōsaka pref.	5	52.7	-8.4	8.3	86.4	"	"
810±20	" , Sakai, "	11	52.2	-19.1	7.6	—	NRM, **	28
805±5	" , K-48, Mie pref.	8	45.2	-12.7	9.0	38.9	A?—	31
800±20	" , Kishibe H-1, Ōsaka pref.	16	47.9	-14.3	2.7	182.0	"	"
"	" , Kishibe N-1, "	15	47.1	-14.9	3.0	163.0	"	"
800±850	" , KM-38-I, "	35	56.7	-28.4	3.9	39.6	"	"
800±10	" , Miyoshi, Aichi pref.	10	47.8	-11.3	9.3	—	NRM, **	28
800	" , Tsutanodi, Iwate pref.	10	47.6	-19.2	0.6	—	" , *	92
800-900	" , Hidarisaku, Chiba, pref. 1	10	48.8	-11.6	2.7	—	" , "	"
"	" , Tsutanoki, Iwate pref. 6	9	46.4	-15.1	1.4	—	" , "	"
"	" , Hishimura, Tochigi pref., 1	3	43.4	-11.6	6.9	—	" , "	"
"	" , Sanageyama, Aichi pref., 3	11	42.2	-14.5	5.1	—	" , "	"
"	" , Hizamori, Aomori pref., 1	12	45.3	-24.4	4.0	—	" , "	"
"	" , " , " , 1	4	45.8	-12.1	3.7	—	" , "	"
780±20	" , Izumi, Ōsaka pref.	14	47.4	-15.8	3.8	—	" , **	28
780±10	" , KM-13, "	14	46.9	-15.4	3.8	—	A?—	31
"	" , KM-22, "	32	49.0	-10.2	3.8	46.0	" , "	"
"	" , KM-31, "	30	46.5	-22.1	2.5	113.1	" , "	"
"	" , KM-33, "	31	48.7	-13.6	2.2	144.4	" , "	"
"	" , KM-51, "	29	44.4	-6.9	2.5	116.2	" , "	"

Age (AD)	Site and Materials	N	I	D	α_{95}	k	Remarks	References
780±10	Baked earth, Okayama No. 1, Mie pref.	14	49.3	-16.7	5.0	65.2	A-?-	31
770±10	" , KM-60, Ōsaka pref.	29	53.0	-11.0	1.4	378.4	"	"
760±10	" , KM-38-II, "	40	51.2	-13.4	1.9	149.9	"	"
"	" , KM-101, "	26	51.5	-8.7	3.1	83.8	"	"
"	" , TK-57, "	10	57.0	-11.0	5.6	75.8	"	"
"	" , TK-57, "	20	59.1	-16.1	2.7	150.2	"	"
"	" , TK-53, N., "	19	52.8	-10.2	2.0	275.7	"	"
"	" , TK-53, A., "	22	51.1	-13.0	1.5	415.0	"	"
760±20	" , Hara, No. 5, Mie pref.	14	62.3	-23.3	4.6	77.0	"	"
"	" , Tamaki, Mie pref.	14	63.0	-24.8	4.6	—	NRM, **	27
750±10	" , TK-45, Ōsaka pref.	19	54.1	-9.8	2.3	223.6	A-?-	31
750	Tuff, Ōshima, Izu	8	52.5	-17.5	2.3	—	NRM, *	100, 102
"	" , " , "	7	51.1	-13.5	3.8	—	" , "	" , "
750±40	Baked earth, Sakai, Ōsaka pref.	14	47.4	-15.8	3.8	—	" , **	27
750±20	" , Nisshin, Aichi, pref.	9	55.5	-15.2	6.3	—	" , "	"
750±40	" , Taki, Mie pref.	16	55.6	-9.5	4.5	—	" , "	"
"	" , Sakai, Ōsaka pref.	8	55.4	-16.1	6.0	—	" , "	"
740-750	" , Nishin, Aichi pref.	7	53.2	-14.7	1.6	—	ST	52
740±10	" , KM-102, Ōsaka pref.	25	57.3	-9.1	2.2	171.3	A-?-	31
720-750	" , Sakai, "	9	51.0	-13.7	3.0	—	ST	52
720±20	" , " , "	14	55.3	-15.6	4.2	—	NRM, **	27
713±	" , Narayama, Nara pref.	5	51.3	-19.1	2.4	—	ST	52
700±20	" , Ikenotain No. 2, Mie pref.	16	56.7	-12.6	4.3	73.7	A-?-	31
"	" , Taki, Mie pref.	16	55.6	-9.5	4.5	—	NRM, **	28
700±10	" , MT-21, Ōsaka pref.	14	55.3	-21.8	4.6	61.0	A-?-	31
690±10	" , I-17, Aichi pref.	9	56.3	-16.1	6.6	61.1	"	"
"	" , Nisshin, Aichi pref.	9	55.5	-15.2	6.3	—	NRM, **	28
690±20	" , Yamamuro No. 1, "	12	43.8	-15.1	2.7	264.8	A-?-	31
"	" , " No. 2, "	9	40.2	-10.4	4.6	124.2	"	"
670-680	" , Takaoka No. 3, Hyōgo pref.	19	53.2	-3.8	2.0	283.0	"	"

Age (AD)	Site and Materials	N	I	D	α_{95}	k	Remarks	References
670-680	Baked earth, Takaoka No. 4, Hyōgo pref.	16	57.2	-13.5	2.8	171.9	A?-	31
"	" , " No. 4-B(1), "	5	63.0	-4.9	3.7	664.5	"	"
"	" , " No. 4-B(2), "	15	57.3	-5.0	2.8	184.5	"	"
670±20	" , Nishi Ōkane, Mie pref.	10	56.0	-25.0	6.2	61.6	"	"
650±10	" , TK-48, Ōsaka pref.	14	66.3	-24.3	2.9	196.6	A?-	"
"	" , TK-67, "	8	59.3	-11.2	2.9	348.3	"	"
650	Basalt, Ōshima, Izu	8	52.5	-17.5	2.3	—	NRM, *	98, 100, 101, 102
650±40	Baked earth, Sakai Ōsaka pref.	29	56.0	-22.4	1.9	—	" , **	27
630±10	" , TK-46, "	35	63.5	-15.6	2.1	129.7	A?-	31
"	" , KM-28-I, "	25	58.1	-13.1	6.3	23.0	"	"
"	" , KM-28-II, "	28	59.8	-10.4	3.0	116.3	"	"
620±20	" , Kyōto, Kyōto pref.	13	57.2	-21.3	3.1	—	NRM, **	27
600±10	" , KM-3, Ōsaka pref.	30	53.8	-14.8	1.4	363.4	A?-	31
600-700	" , Hōnanchō, Tōkyo, 2	12	44.3	-16.4	6.9	—	NRM, *	92
"	" , Kusakabe, Yamanashi pref., 1	9	39.2	-14.4	14.9	—	" , "	"
600±	" , Tengudai, Tōkyo, 1	6	46.6	-20.6	2.6	—	" , "	"
"	" , " , " , 2	5	44.3	-17.6	13.2	—	" , "	"
580±10	" , TK-212, Ōsaka pref.	28	55.8	-20.1	2.4	132.6	A?-	31
560±20	" , Sakai, "	5	45.2	-21.1	7.6	—	NRM, **	28
550±580	" , Takakura, "	3	45.0	-15.6	2.5	—	" , "	52
550±20	" , Sakai, "	5	45.2	-21.1	7.6	—	" , "	27
"	" , TK-10, "	5	45.2	-20.1	7.4	107.2	A?-	31
"	" , Sakai, "	4	58.1	-21.8	2.8	—	NRM, **	27
"	" , " , "	9	47.3	0.2	4.6	—	" , "	"
"	" , " , "	11	47.6	-12.0	3.1	—	" , "	"
"	" , " , "	6	51.5	-22.8	3.4	—	" , "	"
500	Basalt, Ōshima, Izu	9	39.0	1.0	4.5	—	NRM, *	98, 100, 101, 102
"	Tuff, " , "	10	33.0	0.8	8.2	—	"	100, 102
500±100	Basalt, " , "	18	44.2	4.0	3.5	98.4	A?-	31
500±10	Baked earth, KM-11, lower, Ōsaka pref,	25	59.7	-17.9	1.9	244.2	"	"

Age (AD)	Site and Materials	N	I	D	α_{95}	k	Remarks	References
500±10	Baked earth, KM-11, upper, Ōsaka pref.	7	60.1	-18.4	4.0	229.0	A?-	31
500±20	" , TM-47, Ōsaka pref.	9	45.9	2.3	5.0	95.3	"	"
"	" , TK-71, "	27	47.1	-7.7	2.6	116.0	"	"
500-600	" , Kurihara, Tōkyo, 2	4	45.9	-24.2	11.2	—	NRM, *	92
"	" , " , " , 3	4	57.2	-25.1	3.7	—	" , "	"
"	" , Ichigao, Kanagawa, pref., 1	2	57.5	-27.6	7.0	—	" , "	"
"	" , Hōnanchō, Tōkyo, 1	9	49.9	-23.9	4.9	—	" , "	"
460-520	" , TK-68B, Ōsaka pref.	23	42.3	0.8	6.3	23.6	A?-	31
485±15	" , TG-43-W, "	8	50.2	-9.4	4.6	147.8	A?-	"
480±20	" , Sakai, "	10	42.3	-2.9	5.8	—	NRM, **	27
480±10	" , Hisai, Mie pref.	14	49.2	-16.4	2.9	—	" , "	"
470±30	" , Sakai, Ōsaka pref.	10	42.3	-2.9	5.8	—	" , "	28
480±20	" , TK-33, "	10	47.8	-14.1	3.8	166.1	A?-	31
"	" , TK-33, "	5	41.9	-8.9	6.1	156.3	"	"
"	" , TK-33, "	19	45.3	-2.7	3.4	96.4	"	"
"	" , KM-2, "	31	47.0	-18.7	4.2	36.8	"	"
"	" , MT-70, "	25	42.4	-6.1	2.9	101.1	"	"
480±10	" , Hisai, Mie pref.	14	49.5	-15.0	3.3	143.8	"	"
480±20	" , TG-43-I, Ōsaka pref.	30	48.4	-0.6	2.0	180.9	"	"
470±10	" , TG-43-II, "	29	44.5	-5.3	2.6	106.7	"	"
460±10	" , TG-43-III, "	26	43.1	-4.4	1.6	202.7	"	"
460±20	" , TK-208, "	10	41.5	-3.6	5.8	69.1	"	"
460-520	" , TK-68A, "	16	49.6	1.2	4.5	67.6	"	"
460-470	" , TK-50, "	27	51.0	-3.3	2.0	87.5	"	"
450-500	" , Habikino, No. 1, A, Ōsaka pref.	27	40.9	-9.1	3.9	51.0	"	"
"	" , " , No. 2, B, "	17	61.4	-4.9	4.5	68.8	"	"
"	" , " , No. 3A, "	9	44.6	-10.5	4.9	110.1	A?-	"
"	" , " , No. 3B, "	9	39.4	-8.0	4.4	139.9	"	"
"	" , " , No. 3C, "	9	43.4	-10.0	3.5	217.4	"	"
"	" , " , No. 4, "	11	39.5	-8.3	6.4	52.6	"	"

Age (AD)	Site and Materials	N	I	D	α_{95}	k	Remarks	References
440-520	Baked earth, TK-85, Ōsaka pref.	7	43.4	-8.7	5.5	119.3	A?-	31
430±20	" , TK-87, "	11	52.0	14.4	5.2	78.6	"	"
300±	" , Anu, "	9	33.5	0.8	8.5	37.7	"	"
"	" , " , "	22	53.7	23.0	5.1	38.1	"	"
300-400	" , Maruyama, Tōkyo 1	10	55.4	7.0	4.4	—	NRM, *	92
"	" , Kurihara, Tōkyo 5	2	57.4	0.6	—	—	" , "	"
"	" , " , " 8	5	53.9	4.2	4.1	—	" , "	"
"	" , " , " 9	6	49.7	10.8	9.0	—	" , "	"
"	" , " , " 11	7	54.7	8.0	5.1	—	" , "	"
"	" , Goryō, Saitama pref., 1	12	55.7	11.6	3.3	—	" , "	"
"	" , " , " , 2	7	54.1	12.5	1.9	—	" , "	"
"	" , " , " , 3	7	57.1	5.4	2.9	—	" , "	"
"	" , " , " , 4	9	59.0	4.2	3.3	—	" , "	"
"	" , " , " , 5	4	49.7	10.5	2.4	—	" , "	"
"	" , " , " , 6	4	56.6	5.9	4.1	—	" , "	"
"	" , " , " , 7	8	53.0	1.2	6.6	—	" , "	"
"	" , Angyō, Saitama pref., 2	11	53.4	-5.3	2.8	—	" , "	"
"	" , Naminoue, Aichi pref., 1	8	58.0	6.2	4.9	—	" , "	"
"	" , Nishitamachi, Tōkyo, 1	12	59.3	2.0	1.9	—	" , "	"
"	" , Sanageyama, Aichi, pref., 4	9	44.2	-14.3	7.4	—	" , "	"
250±30	" , Hata, Mie pref.	26	49.8	-4.1	5.0	40.7	A?-	31
200±	" , Hirakata Takatsukayama	12	59.9	6.2	4.0	118.1	"	"
200-300	" , Goryō, Saitama pref., 9	8	57.8	11.1	3.3	—	NRM, *	92
"	" , " , " , 10	7	58.7	9.0	2.5	—	" , "	"
"	" , Ochiai, Tōkyo, 1	4	57.9	7.7	4.0	—	" , "	"
"	" , " , " , 3	7	58.4	8.0	2.8	—	" , "	"
"	" , Hōnancho, Tōkyo, 3	6	57.1	10.2	3.6	—	" , "	"
"	" , " , " , 4	17	57.7	10.3	0.9	—	" , "	"
"	" , " , " , 5	14	58.3	11.3	1.4	—	" , "	"
"	" , " , " , 6	12	58.2	10.2	1.7	—	" , "	"

Age (AD)	Site and Materials	<i>N</i>	<i>I</i>	<i>D</i>	α_{95}	<i>k</i>	Remarks	References
200-300	Baked earth, Hōnancho, Tōkyo, 7	14	58.9	12.4	0.8	—	NRM, *	92
-2586±220	" , Ubayama, Chiba pref.	12	49.2	5.1	3.3	—	NRM, *, C14	"
-2700	" , Osakata, Ibaragi pref., 1	14	55.9	-2.2	3.1	—	NRM, *	"
"	" , " , Ibaragi pref., 1	13	56.4	-1.0	2.0	—	" , "	"
"	" , Angyō, Saitama pref., 1	10	41.0	-12.2	2.9	—	" , "	"
-2500--2700	" , Ochiai, Tōkyo, 5	7	59.0	9.0	4.1	—	" , "	"
"	" , " , " , 6	15	53.5	2.3	1.5	—	" , "	"
-2700	" , Ubayama, Chiba pref., 2	11	53.6	6.9	2.9	—	" , "	"
"	" , Kitami, Tōkyo, 1	8	52.1	11.8	3.1	—	" , "	"
"	" , " , " , 2	12	51.7	10.1	1.9	—	" , "	"
"	" , " , " , 3	13	53.5	12.0	0.7	—	" , "	"
"	" , " , " , 4	12	53.1	12.2	1.4	—	" , "	"
"	" , " , " , 5	13	46.3	7.1	1.7	—	" , "	"
"	" , Hasobe, Chiba pref., 1	3	52.4	13.4	5.5	—	" , "	"
"	" , " , " , 2	3	56.0	7.8	6.1	—	" , "	"
"	" , " , " , 3	3	54.1	5.4	6.1	—	" , "	"
-3000--3100	" , Renkōji, Tōkyo, 1	3	53.5	20.8	20.4	—	" , "	"
"	" , " , " , 2	4	48.4	24.6	19.2	—	" , "	"
"	" , " , " , 3	4	56.1	5.2	7.5	—	" , "	"
"	" , Murayama, Saitama pref., 1	6	50.4	-3.6	2.0	—	" , "	"
"	" , Kwarazuka, Chiba pref., 1	11	52.3	-10.0	4.6	—	" , "	"
"	" , Kwarazuka, Chiba pref., 1	8	54.0	-4.3	4.3	—	" , "	"
-3100--3200	" , Miyashitacho, Tōkyo, 1	2	56.4	7.0	—	—	" , "	"
"	" , " , " , 2	8	55.7	11.3	3.5	—	" , "	"
"	" , Minamihori, Kanagawa, pref., 6	13	44.5	-39.6	4.6	—	" , "	"
"	" , " , " , 7	11	43.8	-27.0	6.2	—	" , "	"
"	" , " , " , 8	4	45.1	-30.8	18.1	—	" , "	"
"	" , " , " , 9	3	46.3	-16.3	19.5	—	" , "	"
"	" , " , " , 14	4	47.3	-0.3	8.1	—	NRM, *, C14	"
"	" , " , " , 15	6	51.4	-2.2	11.4	—	NRM, *, C14	"
"	" , " , " , 16	5	48.0	-3.4	12.6	—	" , "	"
"	" , " , " , 17	12	49.6	-1.4	2.4	—	" , "	"

Age (AD)	Sitr and Materials	N	I	D	α_{95}	k	Remarks	References
-3100--3200	Baked earth, Minamihori, Kanagawa, pref., 18	14	50.6	3.7	1.2	—	NRM, *	92
"	" , " , " , 19	13	49.5	4.7	3.6	—	" , "	"
"	" , " , " , 20	10	50.0	2.6	2.0	—	" , "	"
"	" , " , " , 21	7	49.7	0.7	3.8	—	" , "	"
"	" , " , " , 22	7	50.2	2.1	1.4	—	" , "	"
"	" , " , " , 23	4	47.8	1.3	5.6	—	" , "	"
"	" , " , " , 24	7	51.6	3.7	4.6	—	" , "	"
"	" , " , " , 25	9	48.5	-5.8	4.0	—	" , "	"
"	" , " , " , 26	6	47.7	-5.5	4.3	—	" , "	"
"	" , " , " , 27	8	48.3	-3.2	7.1	—	" , "	"
"	" , " , " , 28	6	49.1	-7.4	4.9	—	" , "	"
"	" , " , " , 29	6	49.0	-5.6	5.1	—	" , "	"
"	" , " , " , 30	7	53.5	-2.3	1.8	—	" , "	"
"	" , " , " , 31	5	51.5	-6.3	7.4	—	" , "	"
"	" , " , " , 32	7	48.8	-3.3	3.0	—	" , "	"
"	" , " , " , 33	5	50.7	-3.7	5.9	—	" , "	"
"	" , " , " , 14	4	47.3	-0.3	8.1	—	" , "	"
-3200±400	" , " , " , 15	6	51.4	-2.2	11.4	—	NRM, *, C14	"
"	" , " , " , 20	10	50.5	2.6	2.0	—	NRM, *	"
-3300	" , " , " , 1	12	50.7	-8.6	3.5	—	" , "	"
-3300-3400	" , Soya, Chiba pref., 1	4	49.9	41.9	10.6	—	" , "	"
-3300	" , Minamihori, Kanagawa pref., 2	5	49.9	-16.4	9.5	—	" , "	"
"	" , " , " , 3	8	40.9	13.7	1.3	—	" , "	"
"	" , " , " , 4	8	44.8	10.8	7.0	—	" , "	"
"	" , " , " , 5	6	47.8	13.8	3.8	—	" , "	"
-3400	" , Fujioka, Tochigi pref., 1	10	42.9	-6.3	0.9	—	" , "	"
-3600	" , Minamihori, Kanagawa pref., 36	13	51.4	-7.0	2.0	—	" , "	"
-3600--3700	" , Maegasaki, Chiba pref., 1	5	41.7	-23.8	7.0	—	" , "	"
"	" , Ōyu, Akita pref., 1	3	-46.2	-154.9	34.5	—	" , "	"
"	" , Toyooka, Saitama pref., 1	9	52.1	-2.7	2.8	—	" , "	"
-7000±500	" , Kitaiki	6	57.5	-4.9	4.8	—	NRM, C14	53
"	" , " , " , 1	5	56.1	-9.0	7.8	—	" , "	"
-7500±500	" , " , " , 1	5	45.6	-14.4	6.3	—	" , "	"

Age (my.)	Site and Materials	N	I	D	α_{95}	k	P	VPP		Remarks	References
								Lat.	Long.		
—	Andesite, Hakone, Kanagawa pref.	OSN 2	46.0	-33.4	3.0	—	+	73	20	NRM, INT	45, 60
—	" , " , "	OSN 3	44.7	-44.7	3.2	—	+	62	49	"	" , "
—	" , " , "	OSN 4	56.0	-45.3	12.5	—	+	71	81	" , INT	" , "
—	" , " , "	OSN 5	58.7	-38.4	3.0	—	+	92	82	"	" , "
—	" , " , "	OSN 6	71.2	-15.2	6.1	—	+	68	130	" , INT	" , "
—	" , " , "	OSN 7	56.7	4.9	4.6	—	+	82	117	" , "	" , "
—	" , " , "	OSN 8	51.9	-3.3	5.8	—	+	88	-53	" , "	" , "
—	" , " , "	OSN 9	58.4	-5.5	2.0	—	+	76	179	"	" , "
—	" , " , "	OSN 10	55.6	-5.4	3.2	—	+	80	-161	"	" , "
—	" , " , "	OSN 11	50.5	-0.4	7.1	—	+	83	-103	" , INT	" , "
—	" , " , "	OSN 12	45.5	3.0	35.7	—	+	81	-174	"	" , "
—	" , " , "	OSN 13	54.2	3.9	3.2	—	+	84	156	"	" , "
—	" , " , "	OSN 14	51.9	3.2	3.9	—	+	87	172	"	" , "
—	" , " , "	ONS 15	49.2	9.3	13.4	—	+	71	-130	"	" , "
—	" , " , "	ONS 16	32.3	-15.2	14.9	—	+	86	179	"	" , "
—	" , " , "	ONS 17	57.7	-2.9	2.0	—	+	86	180	" , INT	" , "
—	" , " , "	ONS 18	55.5	3.8	2.5	—	+	89	-98	" , INT	" , "
—	" , " , "	ONS 19	52.0	19.3	10.2	—	+	76	-101	"	" , "
—	" , " , "	ONS 20	51.5	-5.5	16.2	—	+	82	-120	"	" , "
—	" , " , "	ONS 21	45.9	-27.4	21.4	—	+	85	-142	"	" , "
—	" , " , "	ONS 22	72.7	-10.2	42.2	—	+	83	-25	"	" , "
—	" , " , "	ONS 24	51.2	-11.2	4.0	—	+	85	29	" , INT	"
—	" , " , "	ONS 25	45.7	17.2	6.2	—	+	84	-116	"	"
—	" , " , "	ONS 26	55.4	0.9	5.1	—	+	75	-106	"	"
—	Welded tuff, Kujū, Ōita pref. A		48.2	-4.5	—	—	+	—	—	A300, TD150	83
—	Andesite, " , " , "	D2	26.8	-4.8	—	—	+	—	—	" , "	"
—	" , " , " , "	K6	51.6	-9.6	—	—	+	—	—	" , "	"
—	" , " , " , "	KP	32.8	-21.7	—	—	+	—	—	" , " , INT	"

Age (my.)	Site and Materials	N	I	D	α_{95}	k	P	VPP		Remarks	References
								Lat.	Long.		
—	Andesite, Kujū, Ōita pref. D4	(4)	43.8	-4.8	—	—	+	—	—	A300, TD150, INT	83
—	" , " , " K7	(5)	34.4	-36.3	—	—	+	—	—	" , " , "	"
—	" , " , " K4	(3)	51.6	-9.6	—	—	+	—	—	" , " , "	"
—	" , " , " Dh	(4)	-51.2	-118.3	—	—	—	—	—	" , " , "	"
—	Basalt, Yamaguchi group, Yamaguchi pref.										
—	" , " , " Group 1	31	64	-32	9	—	+	63	72	NRM	11
—	" , " , " Group 2	140	58	4	6	—	+	85	163	NRM	"
—	Andesite, Ōmuro-yama, Kanagawa pref.	—	14	10	14	—	+	78	-80	no Mht, NRM	54
—	" , Zyōbosi volcano, Kanagawa pref.	—	47	-9	7	—	+	80	0	" , " , "	"
—	" , Umenokidake volcano, Kanagawa pref.	—	39	-9	6	—	+	76	-14	" , " , "	"
—	" , Central cone, Hakone volcano, Kanagawa pref. CC ₈	—	38	-6	23	—	+	75	-22	" , " , "	"
—	" , " , " CC ₇	—	44	-15	22	—	+	75	7	" , " , "	"
—	" , " , " CC ₅	—	56	-4	20	—	M	87	80	" , " , "	"
—	Pumice, " , " CC ₁	—	82	-11	19	—	+	50	134	" , " , "	"
—	Andesite, Young somma, Hakone volcano, Kanagawa pref. YS ₅	—	33	2	15	—	+	73	-46	" , " , "	"
—	" , " , " YS ₃	—	51	-20	73	—	+	75	38	" , " , "	"
—	Andesite, Old somma, Hakone volcano, Kanagawa pref. O ₂₀	—	52	3	10	—	+	87	-90	" , " , "	"
—	" , " , " O ₁₈	—	60	-12	18	—	+	81	86	" , " , "	"
—	" , " , " O ₁₂	—	44	8	7	—	+	80	-72	" , " , "	"
—	" , " , " O ₁₁	—	55	-9	10	—	+	84	60	" , " , "	"
—	" , " , " O ₅	—	47	22	16	—	+	73	-112	" , " , "	"
—	Basalt, " , " OS ₁	—	38	-40	18	—	+	57	33	" , " , "	"
—	" , " , " OS ₁	—	65	3	16	—	+	78	144	" , " , "	"
—	Andesite, " , " O ₂	—	47	-21	21	—	+	75	28	" , " , "	"
—	Andesite, Usami volcano, Shizuoka pref. UV06	5	-69.3	139.3	6.6	134	—	-56.2	-85.7	A120, INT	42, 45
—	" , " , " UV07	7	-53.7	152.5	4.5	223	—	-67.4	-124.6	" , " , "	" , "
0.71	" , " , " UV06	5	-54.3	141.2	10.3	56	—	-58.4	-119.8	" , " , KA	" , " , 22

Age (my.)	Site and Materials	N	I	D	a_{95}	k	P	VPP		Remarks	References
								Lat.	Long.		
0.71	Andesite, Usami volcano, Shizuoka pref.	UV09	-43.6	136.1	11.2	37	-	-51.2	-132.7	A120, INT,	42, 45
0.45-0.66	"	UV10	-43.5	134.8	7.4	57	-	-50.1	132.2	" , " , KA	" , " , 22
—	"	UV11	62.6	-17.3	6.9	122	+	74.0	88.5	" , " ,	" , " ,
—	"	UV17	47.1	-8.6	10.4	55	+	80.1	9.1	" , " ,	" , " ,
0.82	"	UV13	49.0	-1.4	6.1	58	+	84.8	-27.4	" , " , KA	" , " , 22
—	Scorea,	UV16	36.7	-6.9	6.6	65	+	74.3	-16.3	" , " ,	" , " ,
0.73	Andesite,	UV14	49.2	-5.4	5.2	99	+	83.3	3.6	" , " , KA	" , " , 22
(UV06-UV14 make a thick cliff of successive lava flows)											
—	"	UV22	66	-31	7	—	+	66	93	no Mht, NRM	54
—	"	UV21	63	-32	19	—	+	67	83	" , " ,	"
—	"	UV20	63	-29	7	—	+	56	86	" , " ,	"
—	"	UV23	53	-7	8	—	+	85	33	" , " ,	"
—	"	UV28	21	163	24	—	M	-41	157	" , " ,	"
—	"	UV36	-43	-144	20	—	—	-62	-117	" , " ,	"
—	"	UV35	-18	73	15	—	M	11	-113	" , " ,	"
—	"	UV34	-53	97	38	—	M	-25	-107	" , " ,	"
—	"	UV33	-71	-137	31	—	—	-58	-3	" , " ,	"
—	"	UV32	-62	114	21	—	—	-43	-104	" , " ,	"
—	"	UV48	-30	151	13	—	—	-61	-169	" , " ,	"
—	"	UV47	-3	144	44	—	—	-47	-175	" , " ,	"
—	"	UV45	-41	150	7	—	—	-65	-155	" , " ,	"
—	"	UV18	-46	151	12	—	—	-68	-146	" , " ,	"
—	"	UV40	70	-32	6	—	+	61	108	" , " ,	"
—	"	UV41	56	-26	21	—	+	73	62	" , " ,	"
—	"	UV43	43	-24	28	—	+	70	26	" , " ,	"
—	"	UV42	48	-48	19	—	+	54	51	" , " ,	"
—	Shale, Zyō formation, Shizuoka pref.		51	-15	16	—	+	79	33	" , " ,	"
—	Andesite, Yugawara, Shizuoka pref.	YV ₁	46	-3	7	—	+	82	24	" , " ,	"
—	Dacite, Akanezaki, Shizuoka pref.	D ₂	50	-25	7	—	+	72	42	" , " ,	"

Age (my.)	Site and Materials	N	I	D	α_{95}	k	P	VPP		Remarks	References
								Lat.	Long.		
—	Basalt, Taga volcano, Shizuoka pref. TV ₅	—	54	-34	5	—	+	68	55	no Mht, NRM	54
—	Andesite, Taga volcano, Shizuoka pref. TV ₄ (1)	—	57	-6	17	—	+	86	97	" , "	"
—	" , " , " TV ₂ (2)	—	49	11	13	—	+	82	98	" , "	"
—	" , " , " TV ₁	—	57	-15	9	—	+	79	65	" , "	"
—	" , " , " TV ₄	—	39	-46	12	—	+	54	39	" , "	"
—	Basalt, Atagoyama, Nagasaki pref.	5	-45	153	10	—	—	—	—	NRM	67
—	" , Kuchinotsu, "	4	-14	-177	21	—	—	—	—	"	"
—	" , Hayasaki, "	3	-45	-152	7	—	—	—	—	"	"
—	Lava, Tsukushi, Aso, Kumamoto pref.	5	-79	115	6	—	—	—	—	"	"
—	" , Hachibuse, Nagano pref.	2	-42	-170	16	—	—	—	—	"	"
—	Dacite, Minakani yama, Nagano pref.	7	(45)	(20)	—	—	+	—	—	" , INT	34
****(Lower Pleistocene-Pliocene)****											
—	Andesite, Hotaka, Gumma pref. HOT08	2	(-35)	(180)	—	—	—	—	—	" , INT	45
—	" , " , " HOT09	4	(-35)	(180)	—	—	—	—	—	" , "	"
—	Basalt, Kawajiri misaki, Yamaguchi pref. Belt B	38	46	21	—	—	+	—	—	"	4, 6, 17
—	" , " , " N ⁻²	5	52	19	5	—	+	—	—	"	11, 13, 17
—	" , " , " N ⁻³	25	50	15	15	—	+	—	—	"	" , " , "
—	" , " , " N ⁻⁴	13	41	33	23	—	+	—	—	"	" , " , "
—	" , " , " R ⁻³	13	-60	166	8	—	—	—	—	"	" , " , "
—	" , " , " R ⁻⁴	23	-56	169	7	—	—	—	—	"	" , " , "
—	" , " , " Belt B	36	-57	169	—	—	—	—	—	"	4, 6, 17
—	" , " , " Belt A	44	-47	160	—	—	—	—	—	"	" , " , "
—	" , " , " Belt C	75	-55	168	—	—	—	—	—	"	" , " , "
—	" , " , " (transition zone)	155	-53	166	—	—	—	—	—	"	4, 6, 17
—	" , Tsuo.	6	35	22	—	—	+	—	—	"	4
—	" , Tawarashima,	5	55	1	—	—	+	—	—	"	"
—	" , Yamaguchi, No. 46	2	39	78	57	—	+	22	-115	"	11
—	" , " , " No. 59	2	49	-19	84	—	+	74	32	"	"

Age (my.)	Site and Materials	N	I	D	α_{95}	k	P	VPP		Remarks	References
								Lat.	Long.		
(0.7-2.4)	Tuff, T-2, Ōsaka group	9	58.6	3.3	10	—	+	—	—	NRM, G	46
"	" , T-1,	4	47.7	1.8	34	—	+	—	—	" , "	"
"	" , T-5,	4	41.3	22.2	25.4	—	+	—	—	" , "	"
"	" , Hōzōin,	4	58.2	14.1	10.2	—	+	—	—	" , "	"
"	" , Sagami,	7	54.5	6.9	27	—	+	—	—	" , "	"
"	" , T-2,	3	45.3	177.3	17	—	—	—	—	" , "	"
"	" , Ichino,	4	46.6	16.3	32	—	—	—	—	" , "	"
—	Lava, Yatsugatake, Nagano pref. T ₁₆	5	38.5	15.5	9	—	+	70	—90	NRM	65
—	" , " , "	4	45	8	8.5	—	+	79	—5	"	"
—	" , " , "	4	36.5	5	5.5	—	+	73	—26	"	"
—	" , " , "	5	23.5	12.5	12.5	—	+	63.5	—14	"	"
—	" , " , "	4	45	4	3.5	—	+	80	—22	"	"
—	" , " , "	5	54.5	15	2.5	—	+	78	—132	"	"
—	" , " , "	4	48.5	16.5	14	—	+	75	—110	"	"
—	" , " , "	5	47	0.5	7.5	—	+	83	—44	"	"
—	Scorea, "	4	73.5	34	18.5	—	+	57.5	104	"	"
—	— , " , "	5	54	4	5	—	+	86	—112	"	"
—	Lava, " , "	4	59	5.5	22.5	—	+	84	—170	"	"
—	— , " , "	5	76	43.5	9	—	+	76	—2	"	"
—	Lava, " , "	4	68.5	147	20	—	M	2	158	"	"
—	" , " , "	5	51	5	7	—	+	84	1	"	"
—	" , " , "	8	50.5	6	5	—	+	83	7	"	"
—	" , " , "	4	20	37.5	31.5	—	+	48	20	"	"
—	" , " , "	1	68.5	28	—	—	+	65	94	"	"
—	" , " , "	5	51	22.5	7.5	—	+	71	40	"	"
—	Dyke, " , "	6	33	30.5	13	—	+	58	24	"	"
—	Lava, " , "	7	52.5	10	5	—	+	81	28	"	"
—	" , " , "	1	32.5	0	—	—	+	71	—42	"	"

Age (my.)	Site and Materials		N	I	D	α_{95}	k	P	VPP		Remarks	References
									Lat.	Long.		
—	Lava, Yatsugatake, Nagano pref.	T ₄	5	41	-8.5	2.5	—	+	75	-10	NRM	65
—	"	"	5	31	-25.5	11.5	—	+	60	13	"	"
—	"	"	5	-22.5	102.5	26	—	—	-32	-140	"	"
—	"	"	12	-8	-27.5	10	—	+	43	-4	"	"
—	Welded tuff,	"	9	59	-16.5	4	—	+	71	26	"	"
—	"	"	5	38.5	-2	4	—	+	75.5	-28	"	"
—	"	"	7	47	5.5	13.5	—	+	82	-63	"	"
—	"	"	5	73.5	9	15	—	+	66	152	"	"
—	Lava,	"	7	46	3	8.5	—	+	82	-63	"	"
—	"	"	7	48	-10.5	7.5	—	+	79	12	"	"
—	"	"	1	57	-23	—	—	+	72	62	"	"
—	"	"	4	71.5	-78	10	—	+	36	96	"	"
—	"	"	5	70	-23.5	16.5	—	+	66	-6	"	"
—	"	"	4	39.5	-11.5	3.5	—	+	71	-2	"	"
—	"	"	4	35.5	7	17.5	—	+	74	-68	"	"
—	"	"	4	41.5	4.5	6.5	—	+	77.5	-61	"	"
—	"	"	15	38	-6	5.5	—	+	74.5	-22	"	"
—	"	"	5	37.5	-2.5	12.5	—	+	75	-33	"	"
—	"	"	5	38	10.5	11	—	+	73	-79	"	"
—	"	"	10	49	2	6	—	+	83	-72	"	"
—	"	"	5	-53.5	-156	7	—	—	-70	48	"	"
—	"	"	5	-45	-151.5	8	—	—	-63	32	"	"
—	"	"	6	-62.5	-157	5	—	—	-71	78	"	"
—	"	"	5	-60.5	-130.5	13	—	—	-51	24	"	"
—	"	"	3	-66.5	-152	10.5	—	—	-66	7	"	"
—	"	"	5	13	-0.5	5.5	—	+	61	-41	"	"
—	Dyke,	"	5	48.5	-9.5	3.5	—	+	79.5	8	"	"
—	Lava,	"	5	12	-176	28.5	—	M	-48	132	"	"
—	"	"	5	-46.5	158	33.5	—	—	-70	-154	"	"

Age (my.)	Site and Materials	N	I	D	α_{95}	k	P	VPP		Remarks	References
								Lat.	Long.		
—	Lava, Yatsugatake, Nagano pref. O ₁₅	6	-61	-85	12.5	—	M	-19	10	NRM	65
—	" , " , " O ₁₆	4	-71	132.5	23.5	—	—	-52	2	"	"
—	" , " , " O ₁₄	5	-72.5	-145.5	7	—	—	-59	-4	"	"
—	" , " , " O ₁₂	8	-61	-166	7.5	—	—	-77.5	15	"	"
—	" , " , " O ₂₁	5	-67	-20	6	—	M	2	-29	"	"
—	" , " , " O ₂₂	4	-75	156.5	11	—	—	-60.5	-64	"	"
—	" , " , " O ₈	5	-59.5	-156	15	—	—	-70.5	36	"	"
—	" , " , " O ₉	9	-50.5	-173	4	—	—	-82	89	"	"
—	" , " , " O ₄	7	-61	-165	17	—	—	-77	15	"	"
—	" , " , " O ₃	6	-11	-165.5	17.5	—	—	-58	110	"	"
—	" , " , " O ₂	8	-60	151.5	7.5	—	—	-68	-111	"	"
—	" , " , " O ₁	10	-56	152	6.5	—	—	-67	-122	"	"
—	" , " , " In	5	-60	112	26	—	—	-38	-106	"	"
—	Basalt, Yamaguchi pref. No. 4	209	55	1	4	—	+	88	131	"	11
—	" , " , " No. 5	17	30	41	17	—	+	49	123	"	"
(0-4)	Silts, Bōsō peninsula, Chiba pref. (Normal and Reverse successions, beyond the Gilbert Reverse Epoch)										61
\$ Tertiary Period											
***** (Upper Tertiary) *****											
—	Basalt, Aziro group, Shizuoka pref.	—	54	-27	49	—	+	71	36	no Mht., NRM	54
—	Andesite, Hanamagari yama, Gumma pref. KH01	7	47.4	1.7	9.1	45	+	82.1	-51.9	A200	45, 73, 75
—	" , " , " KH02	6	59.9	8.5	15.1	21	+	82.0	-167.2	"	" , " , "
—	" , " , " KH03	6	73.6	24.1	40.3	4	+	62.1	164.9	"	" , " , "
3.14	" , Kirizumi yama, " KH06	5	-35.5	-61.3	89.7	2	M	9.6	15.7	" , KA	" , " , "
—	" , " , " KH07	6	-56.5	-79.4	88.5	2	M	-13.8	12.6	"	" , " , "
—	" , " , " KH08	5	-45.0	-46.0	58.9	3	M	13.6	0.1	"	" , " , "
—	" , " , " KH09	5	-25.5	-118.8	75.9	2	—	-31.0	54.8	"	" , " , "
3.05	" , " , " KH10	5	-53.2	-112.0	26.3	9	—	-35.5	29.8	" , KA	" , " , "
—	" , " , " KH11	5	-55.0	-138.0	24.8	11	—	-56.3	37.3	"	" , " , "
—	" , " , " KH12	5	-64.5	-142.7	10.5	54	—	-60.6	17.0	"	" , " , "

Age (my.)	Site and Materials	N	I	D	σ_{95}	k	P	VPP		Remarks	References
								Lat.	Long.		
—	Andesite, Kirizumi yama, Gumma pref. KH99	2	-52.7	-179.6	8.4	881	—	-86.9	132.5	A200	45, 73, 75
—	Basalt, Fuefuki, Kitamatsuura, Kyūshū KM02	9	-32.1	-169.1	33.2	—	—	—	—	A150	45, 72
—	" , Tanohira, " , " KM04	8	-41.3	-179.1	15.4	—	—	—	—	"	" , "
—	" , " , " , " KM08	5	-44.6	165.7	6.4	—	—	—	—	"	" , "
—	" , " , " , " KM21	8	-3.5	175.6	18.0	—	—	—	—	" , INT	" , "
—	" , " , " , " KM23	5	27.2	175.1	13.6	—	M	—	—	" , "	" , "
—	" , " , " , " KM24	10	44.3	10.3	17.8	—	+	—	—	A150	" , "
7.5	" , Tsujinodō, " , " KM30	5	42.2	122.7	26.1	10	+	-10.6	180.5	" , KA	" , " , 74
7.8-9.4	" , " , " , " KM31	5	65.9	57.3	20.1	15	+	45.2	182.1	" , "	" , " , "
7.8-9.1	" , " , " , " KM32	5	7.8	164.3	142.5	1	M	-49.9	154.1	" , "	" , " , "
7.4	" , " , " , " KM33	5	51.3	-1.9	10.1	58	+	87.9	1.3	" , "	" , " , "
8.4	" , " , " , " KM34	5	49.8	-12.4	5.6	184	+	79.1	28.6	" , "	" , " , "
7.8-9.4	" , Ningyōishi yama, Kitamatsuura, Kyūshū KM41	4	35.0	-143.7	55.4	4	+	-27.0	90.4	" , "	" , " , "
8.1-8.3	" , " , " , " KM42	4	43.3	-21.4	10.3	81	+	69.7	21.6	" , "	" , " , "
—	" , " , " , " KM43	5	36.8	-9.1	12.3	40	+	74.9	344.0	"	" , " , "
7.1-10.6	" , " , " , " KM44	8	-46.6	174.5	6.0	68	—	-82.7	173.3	" , KA	" , " , "
—	" , " , " , " KM52	4	-46.7	-179.5	8.2	128	—	-84.8	124.4	" , INT	" , " , "
—	" , " , " , " KM53	5	-50.4	-171.3	5.3	213	—	-83.1	55.4	" , "	" , " , "
—	" , " , " , " KM54	5	-46.0	171.8	9.5	66	—	-80.8	181.7	"	" , " , "
—	" , " , " , " KM55	5	-47.0	-172.9	8.9	75	—	-82.1	77.2	"	" , " , "
—	Basalt, Tanna basin, Shizuoka pref.	5	46	8	7	—	+	—	—	no Mht., NRM	55, 70
—	" , " , " , " "	7	40	0	7	—	+	—	—	" , "	" , "
—	mean value of Tanna basin		—	—	—	—	—	79	57	—	" , "
—	Andesite, Mitaki, Miyagi pref (1)	5	46	19	7	—	+	—	—	no Mht., NRM	" , "
—	" , " , " , " (2)	5	58	8	—	—	+	—	—	" , "	" , "
—	mean value of Mitaki group		—	—	—	—	—	77	-109	—	" , "

Age (my.)	Site and Materials	N	I	D	α_{95}	k	P	VPP		Remarks	References
								Lat.	Long.		
—	Andesite, Kuju volcano, Ōita pref. H1	(1)	32.6	-11.3	—	—	+	—	—	A300, TD150, INT	45, 83
—	Rhyolite, " , " Rw	(3)	-59.6	117.5	—	—	—	—	—	" , " "	" , "
—	" , " , " R1	(1)	-41.0	-175.9	—	—	—	—	—	" , " "	" , "
—	Andesite, " , " P1	(6)	-40.3	154.5	—	—	—	—	—	" , " "	" , "
—	" , " , " Tp	(2)	55.7	5.4	—	—	—	—	—	" , " "	" , "
—	" , " , " H4	—	65.5	-1.4	—	—	+	—	—	" , " "	83
—	" , " , " H2	—	45.3	6.9	—	—	+	—	—	" , " "	"
—	" , " , " Y	—	46.0	-2.4	—	—	+	—	—	" , " "	"
—	Rhyolite, " , " P1	—	55.8	19.1	—	—	+	—	—	" , " "	"
—	Andesite, " , " P1	—	37.0	-14.1	—	—	+	—	—	A300, TD150	"
—	Welded tuff, Kuju volcano, Ōita, pref. I3	—	—	—	—	—	—	—	—	A400* (partly)	49, 50, 51
—	" , Yasuhara(1), Komoro, Nagano pref.	4	-47	-155	5	—	—	-67	58	"	" , " , "
—	" , Hanare yama(2), " , "	4	-36	-155	8	—	—	-63	70	"	" , " , "
—	" , Sehayu gawa(3), " , "	6	-45	-153	6	—	—	-65	58	"	" , " , "
—	" , " (4), " , "	4	-63	-102	3	—	—	-32	9	"	" , " , "
—	Porphyrite, Miyanoshita (5), " , "	4	-52	-74	4	—	M	-8	9	"	" , " , "
—	Welded tuff, Higashi zawa, " , "	4	14	-79	21	—	M	12	44	"	" , " , "
—	" , Ōya(2), " , "	4	-22	7	7	—	M	12	20	"	" , " , "
—	Basalt, Fukazawa(8), " , "	2	64	13	—	—	+	75	175	"	" , " , "
—	" , " (9), " , "	2	61	19	—	—	+	74	-169	"	" , " , "
***** (Pliocene-Miocene) *****											
—	— , N-E Hokkaidō A-2	7	68	75	12	—	+	47	-177	A-?-	64
—	— , " A-3	3	37	52	5	—	+	60	-136	"	"
—	— , " A-4	9	— 5	73	5	—	M	75	133	"	"
—	— , " A-5	2	5	69	13	—	M	80	160	"	"
—	Green tuff, Ōkura river, Miyagi pref.	5	65	5	—	—	+	—	—	NRM	23
—	Andesite dyke, " , "	11	-60	-170	—	—	—	—	—	"	"
—	Andesite, Enrei-Suwa group, Nagano pref. Su-1	1	-54	177	—	—	—	-86	-140	A400* (partly)	49, 50, 51
—	" , " , " Su-2	4	-40	168	—	—	—	-73	-78	"	" , " , "
—	" , " , " Su-3	6	2	-147	—	—	M	-34	87	"	" , " , "

Age (my.)	Site and Materials	N	I	D	α_{95}	k	P	VPP		Remarks	References
								Lat.	Long.		
—	Andesite, Enrei-Suwa group, Nagano pref. Su-4	6	-25	-150	—	—	M	-55	75	A400*(partly)	49, 50, 51
—	" " " " Su-5	4	-42	-132	—	—	—	-46	45	"	" " " "
—	" " " " Su-6	6	-25	-177	—	—	—	-67	127	"	" " " "
—	" " " " Sn-7	4	35	121	—	—	M	-12	-168	"	" " " "
—	" " " " Enrei-Fukuzawa yama group,										
	Nagano pref. Ks-1	4	-56	142	—	—	—	-59	-120	"	" " " "
—	" " " " Fu-1	3	-45	137	—	—	—	-52	-137	"	" " " "
—	" " " " Fu-2	1	13	144	—	—	M	-37	-178	"	" " " "
—	" " " " Ks-2	8	-44	127	—	—	—	-44	-127	"	" " " "
—	" " " " Fu-3	11	-72	128	—	—	—	-49	-90	"	" " " "
—	" " " " Fu-4	2	-51	-120	—	—	—	-40	61	"	" " " "
—	" " " " Enrei-Kawagishi group	4	-30	-160	6	—	—	-64	85	"	" " " "
—	" " " " Kw-1	2	-38	-160	—	—	—	-67	78	"	" " " "
—	" " " " Kw-2	2	-35	-160	28	—	—	-65	83	"	" " " "
—	" " " " Kw-3	2	-42	168	—	—	—	-74	-174	"	" " " "
—	" " " " Kw-4	2	-27	144	27	—	—	-49	-156	"	" " " "
—	" " " " Kw-5	2	-44	180	2	—	—	-81	135	"	" " " "
—	" " " " Kw-6	5	42	-171	—	—	M	-30	124	"	" " " "
—	" " " " Enrei-Wada group	1	-49	-166	—	—	—	-76	-160	"	" " " "
—	" " " " Wa-1	3	-38	-176	—	—	—	-75	115	"	" " " "
—	" " " " Wa-2	3	-36	-177	5	—	—	-73	112	"	" " " "
—	" " " " Wa-3	3	53	-151	12	—	M	-16	110	"	" " " "
—	" " " " Wa-4	1	-2	180	—	—	—	-56	135	"	" " " "
—	" " " " Wa-5	1	-41	-175	—	—	—	-78	115	"	" " " "
—	" " " " Wa-6	5	-62	-164	7	—	—	-76	5	"	" " " "
—	" " " " Wa-7	1	-60	86	—	—	—	—	—	"	" " " "
—	" " " " Wa-8	1									
—	" " " " Wa-9	1									
—	" " " " Enrei-Mitsumine and										
—	Andesite, Enrei-Mitsumine and										
—	Utsukushigahara group, Nagano pref. Mi-1	7	-19	168	10	—	—	-64	-161	"	" " " "
—	" " " " Mi-2	1	31	176	—	—	M	—	—	"	" " " "

Age (my.)	Site and Materials	N	I	D	α_{95}	k	P	VPP		Remarks	References
								Lat.	Long.		
—	Andesite, West of Okkayō, Shigarami formation, Nagano pref.	5	64	20	11	—	+	72	-175	A400*(partly)	49, 50, 51
—	Basalt, Akefujibashi(16), "	3	55	18	11	—	+	75	-141	"	"
—	Andesite, Tsubone, "	5	66	10	6	—	+	76	160	"	"
—	" , Tsuchinoki Seto, "	3	77	-9	6	—	M	68	124	"	"
—	" , Seto(19), "	3	68	23	4	—	M	68	179	"	"
—	" , Konabe(20), "	2	5	60	—	—	+	26	-119	"	"
—	" , Tuff, Seto(21), "	2	70	-48	20	—	M	53	-177	"	"
—	Andesite, Setouchibashi, "	4	76	-12	11	—	M	60	124	"	"
***** (Upper Miocene) *****											
13±4	Granodiorite, Teuchi, S-Kyūshū	15	55	3	—	—	+	87	-177	ST	20
—	" , Hami, S-Kyūshū	5	-43	-53	—	—	M	14	-1	"	"
—	" , Uchinoura, Kagoshima pref.	5	-40	-37	—	—	M	25	-11	"	"
—	Quartz porphyry, Kumano, S-Kyūshū	5	-38	-53	—	—	M	15	6	"	"
—	Rhyolite, Kujū volcano, Ōita pref.	—	-72.3	-172.8	—	—	—	—	—	NRM	83
—	" , " , "	—	24.1	5.2	—	—	+	—	—	"	"
—	Volcanic rocks, Baba, Miyagi pref.	7	-74.5	159.5	7.0	—	—	-63	-62	A-2-	66
—	" , Namiki, "	8	-57.5	148.5	4.0	—	—	-65	41	"	"
—	Volcanic rocks, Mitaki, Miyagi pref.	11	55.0	-9.0	7.5	—	+	82	30	"	"
—	" , Nagabukuro, "	4	33.5	-2.5	9.5	—	+	70	-31	"	"
—	" , N-Akaiishi, "	3	39.5	-11.0	31.0	—	+	72	-5	"	"
—	" , Togami yama, "	3	55.5	14.5	4.0	—	+	78	-124	"	"
—	" , Taihaku san, "	2	42.0	7.0	28.5	—	+	74	-65	"	"
—	" , Mitaki I, "	8	32.0	-18.0	11.5	—	+	64	2	"	"
—	" , Mitaki II, "	8	59.5	-7.0	3.5	—	+	84	72	"	"
—	" , Mitaki III, "	9	58.0	26.0	5.0	—	+	69	-137	"	"
—	" , Sakunami, "	6	39.6	-10.5	4.0	—	+	72	-7	"	"
—	" , Bomeki, "	5	48.0	-16.0	22.5	—	+	74	21	"	"
—	" , Nanamori, "	4	43.5	-14.0	6.0	—	+	73	7	"	"

Age (my.)	Site and Materials	N	I	D	α_{95}	k	P	VPP		Remarks	References
								Lat.	Long.		
—	Volcanic rocks, Miya, Miyagi pref.	6	-12.0	-10.5	16.0	—	M	45	-24	"	66
—	Andesite sheet, Minobu, Yamanashi pref.	6	47	49	17	—	+	(68	combined with ***		
—	Obsidian, Fukushima basin, Fukushima pref. Os ₈	4	-10	158	20	—	—	-44	-152)**	NRM	55
—	" , " , " , "	8	29	99	10	—	M	-4	164	NRM	47
—	" , " , " , "	5	45	-125	17	—	M	12	31	"	"
—	" , " , " , "	3	7	35	13	—	+	47	-82	"	"
—	Rhyolite, " , " , " , "	6	11	13	6	—	+	57	-85	"	"
—	" , " , " , "	5	7	13	16	—	+	54	-59	"	"
—	" , " , " , "	5	16	17	8	—	+	58	-58	NRM	"
—	" , " , " , "	5	44	-11	6	—	+	76	-66	"	"
—	" , " , " , "	5				—	+		-3	"	"
***** (Middle Miocene) *****											
—	Dolerite, Ōkura, Shidara, Aichi pref.	7	-71	-155	6	—	—	(68	combined with **		55
—	Andesite, Tengudana, " , " , "	7	-57	-161	4	—	—	"	-152)*** no Mht, NRM	" , "	"
—	" , Syōjiwa, " , " , "	12	57	19	11	—	+	—	"	" , "	"
—	Dacite, Fukushima basin, Fukushima pref. Iz ₁	10	64	-14	10	—	+	79	96	"	47
—	Andesite, " , " , " , "	7	76	23	12	—	+	62	157	"	"
—	" , " , " , " , "	6	40	-172	18	—	M	-28	132	"	"
—	" , " , " , " , "	3	-26	-175	18	—	—	-66	130	"	"
—	Volcanic rocks, Kamakura yama I, Miyagi pref.	5	78.0	110.5	6.5	—	M	28	165	A?-	66
—	" , Kamakurayama II, " , "	5	-1.0	-97.0	11.0	—	M	-6	55	"	"
—	" , Ōremon, " , " , "	3	-38.5	-102.0	11.0	—	M	-22	41	"	"
—	" , Shimokura, " , " , "	7	-57.5	-175.0	7.0	—	M	-86	51	"	"
—	" , Jōge hot spring, " , " , "	6	11.5	-11.0	6.0	—	+	56	-19	"	"
***** (Miocene) *****											
—	Andesite, Ishigaki, Ryūkyū islands	16	34.3	-43.7	5	—	+	—	—	A120	79
—	" , Kume, " , " , "	28	39.3	3.0	5	—	+	—	—	"	"
—	" , Okinawa, " , " , "	13	-30.0	-154.0	8	—	—	—	—	"	"
—	" , Sugiyama, Fukui pref.	10	49	39	6	58	+	—	—	NRM(stable)	26

Age(my.)	Site and Materials	N	I	D	α_{95}	k	P	VPP		Remarks	References
								Lat.	Long.		
—	Tuff, Ibaragi, Ōsaka pref.	15	-51	-36	5	59	M	—	—	NRM(stable)	26
—	Basalt, Genbudō, Hyōgo pref.	10	-35	-13	6	64	M	—	—	"	"
—	Basalt, Tomuro, Ishikawa pref.	22	48	1	9	12	+	—	—	"	"
—	Andesite, " , "	12	50	-7	7	38	+	—	—	"	"
—	" , Shigisan, Nara pref.	20	59	-4	4	84	+	—	—	"	"
—	Andesite, Kurosaki, Ishikawa pref. K1	3	31	-3	5	—	+	—	—	NRM	44, 96
—	" , " , " K2	4	48	6	11	—	+	—	—	"	"
—	" , " , " K3	4	39	13	11	—	+	—	—	"	"
—	" , Yanada, " Y1	3	52	10	—	—	+	—	—	"	"
—	" , " , " Y2	1	30	70	—	—	+	—	—	"	"
—	" , Anamizu, " A1	3	-42	-120	9	—	—	—	—	"	"
—	" , " , " A2	3	-35	156	54	—	—	—	—	"	"
—	" , " , " A3	3	-31	-66	41	—	—	—	—	"	"
—	" , " , " A4	6	-50	-76	14	—	—	—	—	"	"
—	" , " , " A5	5	-50	-86	11	—	—	—	—	"	"
—	" , " , " A6	5	-40	115	11	—	—	—	—	"	"
—	" , " , " A7	3	-75	-78	19	—	M	—	—	"	"
—	Basalt, Magarigawa, NW-Kyūshū	3	44	-1	15	—	+	82	-42	"	68
—	" , Shinkoba, "	5	45	-2	6	—	+	83	-35	"	"
—	" , Nakazato, "	4	61	4	3	—	+	80	150	"	"
—	" , Ishimuro, "	5	22	-67	12	—	+	25	37	"	"
—	" , Gata, "	3	21	-65	15	—	+	27	35	"	"
—	" , Imafuku, "	4	21	-61	3	—	+	30	33	"	"
—	" , Nomoto, "	4	41	-29	11	—	+	63	26	"	"
—	" , Ishikata yama, "	4	51	-10	11	—	+	81	32	"	"
—	" , Irino, "	3	58	-10	3	—	+	80	76	"	"
—	" , Kirigō, "	3	44	2	5	—	+	82	-68	"	"
—	" , Nomoto, "	4	53	-32	6	—	+	64	50	"	"
—	" , Chikagawauchi, "	4	53	-43	2	—	+	54	53	"	"

Age (my.)	Site and Materials	N	I	D	α_{93}	k	P	VPP		Remarks	References
								Lat.	Long.		
—	Basalt, Maruno, NW-Kyūshū	5	60	-64	5	—	+	40	69	NRM	68
—	" , Akaba,	3	45	-12	3	—	+	78	11	"	"
—	" , Shōbu,	5	55	7	1	—	+	84	-164	"	"
—	" , Ōkubo,	5	44	1	5	—	+	82	-58	"	"
—	" , Ōki,	3	24	-5	3	—	+	68	-36	"	"
—	" , Umesaki,	4	-41	-162	11	—	—	-71	66	"	"
—	" , Iwano,	4	-59	-171	12	—	—	-81	80	"	"
—	" , Tsujinodō(1),	3	-12	-165	22	—	—	-60	99	"	"
—	" , " (2),	3	-41	-172	4	—	—	-78	91	"	"
—	" , Baba,	3	-52	171	6	—	—	-82	-150	"	"
—	" , Nosa,	3	58	-140	12	—	M	-9	100	"	"
—	" , Kishizaki,	4	40	-106	55	—	M	-1	68	"	"
—	" , Saruura,	3	51	-33	4	—	+	-62	46	"	"
—	" , Tsujinodō(3),	4	-37	-180	5	—	—	-78	130	"	"
—	" , " (4),	4	-33	-167	9	—	—	-71	89	"	"
—	" , Imafuku(1),	4	-24	-141	23	—	—	-49	61	"	"
—	" , " (2),	3	-33	-161	40	—	—	-68	78	"	"
—	" , Takekoba,	8	-53	-176	6	—	—	-87	30	"	"
—	" , Gorufu-jō,	5	-49	-156	5	—	—	-69	42	"	"
—	" , Ogawachi yama,	5	-35	163	7	—	—	-70	-178	"	"
—	" , Arita,	5	-59	-154	3	—	—	-68	14	"	"
—	— , — , NE-Hokkaidō A-3	3	62	-17	17	—	+	78	69	A-?-	64
—	Volcanic rocks, Shuku, Dewa, Akita pref.	4	74	-15	10	—	+	—	—	NRM	68
—	" , Gamatai,	4	-48	143	10	—	—	—	—	"	"
—	" , Iwaizawa(I),	6	-66	145	3	—	—	—	—	"	"
—	" , Narasaki(I),	5	-63	118	5	—	—	—	—	"	"
—	" , " (II),	3	-49	138	6	—	—	—	—	"	"
—	" , " (III),	3	-69	106	8	—	—	—	—	"	"

Age (my.)	Site and Materials	N	I	D	α_{95}	k	P	VPP		Remarks	References
								Lat.	Long.		
—	Volcanic rocks, Shigesawa(I), Dewa, Akita pref.	4	40	-9	15	—	+	—	—	NRM	68
—	" , Iwaisawa(II), " , "	3	26	3	12	—	+	—	—	"	"
—	" , Shigesawa(II), " , "	5	88	-156	7	—	M	—	—	"	"
—	" , " (III), " , "	5	81	86	5	—	M	—	—	"	"
—	" , Itado(I), " , "	7	56	-23	9	—	+	—	—	"	"
—	" , " (II), " , "	6	60	-17	16	—	+	—	—	"	"
—	" , " (III), " , "	2	47	-14	4	—	+	—	—	"	"
—	" , Zentoku, " , "	3	52	-24	13	—	+	—	—	"	"
—	" , Fumoto(I), " , "	4	-27	46	13	—	M	—	—	"	"
—	" , " (II), " , "	4	-38	49	7	—	M	—	—	"	"
—	" , " (III), " , "	8	-41	52	11	—	M	—	—	"	"
—	" , " (IV), " , "	8	-34	92	17	—	M	—	—	"	"
—	" , Sugo, " , "	3	-44	106	4	—	M	—	—	"	"
—	" , Akazawaguchi(4), " , "	4	-34	63	15	—	M	—	—	"	"
—	" , Nanamagari togo, " , "	4	34	10	17	—	M	—	—	"	"
—	" , Akazawaguchi(2), " , "	4	58	41	8	—	M	—	—	"	"
—	" , " (1), " , "	4	53	-100	8	—	M	—	—	"	"
—	Sediment, Yamaguchi pref.	31	42	9	39	—	+	78	-89	A?—	11
*****(Lower Miocene)****											
—	Andesite, Minowa Miyagi pref.	6	-63	132	12	—	—	mean of these three		no Mht., NRM	70, 55
—	Dolerite, Tsukimi bashi, Yamanashi pref.	7	50	36	8	—	+	(59	-113)	" , "	" , "
—	Andesite, Iwaine, Toyama pref.	7	8	23	15	—	+	—	—	" , "	" , "
—	Volcanic rocks, Jōge (Ōkura gawa) Miyagi pref.	5	41.0	-5.5	3.5	—	+	75	-20	A?—	66
—	" , Jōge cliff, " , "	7	59.0	-19.0	3.5	—	+	75	61	"	"
—	" , Takinoue, " , "	5	39.0	-20.5	5.5	—	+	66	15	"	"
—	" , Saikawa, " , "	5	58.5	22.5	2.5	—	+	72	-137	"	"
—	" , Isazawa, " , "	5	56.5	3.0	4.0	—	+	87	-104	"	"
—	" , Minami-akaishi(IV), " , "	5	-26.0	156.5	12.0	—	—	-58	-172	"	"
—	" , Nekata, " , "	5	-45.5	89.5	23.5	—	—	-16	-107	"	"

Age (my.)	Site and Materials	N	I	D	α_{95}	k	P	VPP		Remarks	References
								Lat.	Long.		
—	Volcanic rocks, Minami-akaishi(II), Miyagi pref.	4	-53.5	-128.5	22.5	—	—	-49	41	A.?-	66
—	" , Yoshida,	3	59.0	1.5	17.0	—	+	88	162	"	"
—	" , Koizumi,	9	38.0	2.0	2.5	—	+	73	-45	"	"
—	Andesite, Fukushima basin, Fukushima pref. Ub ₃	4	54	46	21	—	+	59	-137	NRM	47
—	Rhyolite,	5	41	47	4	—	+	54	-119	"	"
—	Sand-stone,	4	45	24	11	—	+	71	-101	"	"
—	Andesite,	3	65	-45	14	—	+	60	82	"	"
—	" ,	5	-62	-129	25	—	—	-56	37	"	"
—	" ,	4	-10	-125	27	—	—	-37	74	"	"
—	" ,	6	35	-113	12	—	M	-10	83	"	"
—	" ,	9	65	-130	10	—	M	2	112	"	"
—	Sand-stone,	5	76	-78	22	—	+	39	106	"	"
—	Basalt,	5	68	4	6	—	+	77	151	"	"
—	" ,	4	66	22	4	—	+	73	-177	"	"
—	" ,	3	63	30	7	—	+	70	-158	"	"
—	" ,	4	60	20	8	—	+	77	-148	"	"
—	" ,	5	47	36	20	—	+	63	-117	"	"
—	Sand-stone,	6	29	0	17	—	+	68	-40	"	"
—	Basalt,	5	-48	132	10	—	—	-54	-134	"	"
—	" ,	7	-57	117	6	—	—	-45	-111	"	"
—	" ,	5	42	158	19	—	M	-26	158	"	"
—	" ,	4	52	164	24	—	M	-19	152	"	"
—	" ,	3	39	2	4	—	+	74	-46	"	"
—	" ,	5	52	9	22	—	+	83	-95	"	"
—	" ,	5	48	-5	7	—	+	80	-20	"	"
—	" ,	3	53	-28	8	—	+	71	46	"	"
—	" ,	5	62	-58	6	—	+	50	74	"	"
—	" ,	5	46	-58	5	—	+	45	54	"	"
—	Tuff,	6	54	-55	3	—	+	51	62	"	"
—	Basalt,					—				"	"

Age (my.)	Site and Materials	N	I	D	α_{95}	k	P	VPP		Remarks	References
								Lat.	Long.		
—	Andesite, Near Sapporo, Hokkaidō No. 9	—	—68	156	5	—	—	—72	19	A-?-	62
—	Liparite, " " No. 10	—	—60	90	5	—	—	—26	—97	"	"
—	Andesite, Shibayama, Ōsaka pref. SF1	—	(25	—20)	—	—	+	—	—	NRM, INT	1
—	Basalt, " " SR1	—	(40	0)	—	—	+	—	—	" , "	"
—	" " SR2	—	(65	—15)	—	—	+	—	—	" , "	"
—	Andesite, Yashima, Kagawa pref. YF1	—	(—15	—172)	—	—	—	—	—	" , "	"
—	" " YR1	—	(—50	180)	—	—	—	—	—	" , "	"
—	" " YR2	—	(—35	175)	—	—	—	—	—	" , "	"
—	" , Shiroyama, Kagawa pref. KF1	—	(—40	—172)	—	—	—	—	—	" , "	"
—	" " KR1	—	(—50	170)	—	—	—	—	—	" , "	"
***** (Paleogene) *****											
—	Sediment, Yamaguchi pref. No. 7	13	—32	8	69	—	M	—38	124	A-?-	11
—	" " No. 7-1	5	—61	72	—	—	M	12	88	"	"
—	" " No. 7-2	8	—11	—6	54	—	M	—50	140	"	"
—	Andesite, Sakamoto, Shiga pref.	8	56	31	13.1	19	+	66	—146	A100-250	82
—	" , Tsuō, Okayama pref.	10	63	45	4.5	119	+	54	—160	"	"
—	Basalt, Imamisaki, Shimane pref.	10	59	32	8.2	36	+	64	—140	"	"
—	Granodiorite, Okami, Shimane pref.	29	48	45	5.0	25	+	59	—133	"	"
—	Andesite, Tamagawa, Yamaguchi pref.	5	24	33	10.1	58	+	52	—106	"	"
—	" , Kawauchi, Ehime pref.	5	55	—21	10.0	60	+	73	52	"	"
—	Red shale, Amakusa, Kumamoto pref.	11	43	43	7.1	46	+	50	—133	"	"
—	Rhyolite, Hashidate, Ishikawa pref.	10	50	33	6.3	72	+	59	—136	"	"
—	" , Tenkadai yama, —	46	—61	—167	3.4	34	—	—68	170	"	"
—	" , Kongōdōji, Hyōgo pref.	11	50	40	10.4	21	+	56	135	"	"
—	Welded tuff, Futomi yama, Toyama pref.	13	59	46	10.3	18	+	53	156	"	"
\$ Cretaceous-Tertiary Boundary											
—	Welded tuff, Chōmonkyō, Yamaguchi pref.	15	72.7	63.8	7	—	+	40	—175	A120-250	80
—	" " "	6	53.5	54.5	8	—	+	50	—148	"	"
—	Andesite, Sakugi, Hiroshima pref.	8	46.3	55.1	18	—	+	43	—141	"	"

Age (my.)	Site and Materials	N	I	D	α_{95}	k	P	VPP		Remarks	References
								Lat.	Long.		
—	Andesite, Iwamiyanase, Shimane pref.	7	66.2	47.1	9	—	+	55	-170	A120-250	80
—	Welded tuff, Aioi, Kagawa pref.	34	-53.2	-137.0	7	—	-	-58	160	"	"
—	" , Tanigumi, Gifu pref.	8	54.7	64.7	11	—	+	39	-155	"	"
—	Red shale, Hikoshima, Yamaguchi pref.	7	59.0	88.0	6	—	+	34	-150	"	"
—	Andesite, Hikoshima, Yamaguchi pref.	16	50.3	45.2	7	—	+	47	-143	"	"
—	" , Nihokamigō, Yamaguchi pref.	13	50.0	70.0	2	—	+	38	-158	"	"
—	Welded tuff, " "	9	63.0	49.0	10	—	+	53	-166	"	"
—	" , Juraku	8	61.0	74.0	8	—	+	34	-165	"	"
—	" , Ogori, Yamaguchi pref.	6	65.8	58.6	10	—	+	46	-166	"	"
—	Granodiorite, Akana, Fukuoka pref.	6	64.1	58.9	10	—	+	46	-164	"	"
—	Andesite, Kisa, — , —	12	53.0	82.0	7	—	+	35	-146	"	"
—	" , Nariwa, Okayama pref.	10	41.8	66.9	9	—	+	32	-145	"	"
—	Red shale, " "	45	64.7	58.0	2	—	+	44	-165	"	"
119	Granites, Akabane, Fukushima pref.	5	43	-63	13	—	+	—	—	NRM, KA	24, 32
114	" , Senmaya, Iwate pref.	5	43	-45	13	—	+	—	—	" , "	" , "
114	" , Hitokabe, " "	10	74	-39	16	—	+	—	—	" , "	" , "
110	" , Tono, " "	5	51	-35	12	—	+	—	—	" , "	" , "
109	" , Kinkazan, Miyagi pref.	4	52	-35	17	—	+	—	—	" , "	" , "
107	" , Yoshihama, Iwate pref.	5	57	-29	16	—	+	—	—	" , "	" , "
107	" , Otomo, Yamagata pref.	4	58	-29	20	—	+	—	—	" , "	" , "
106	" , Yamaya, Niigata pref.	8	53	-35	12	—	+	—	—	" , "	" , "
101	" , Abukuma, Fukushima pref.	24	62	-33	7	—	+	—	—	" , "	" , "
85	" , Nagawa Dam, —	1	38	38	—	—	+	—	—	" , "	" , "
84	" , Kinkazan, Miyagi pref.	10	53	51	—	—	+	—	—	" , "	" , "
71	" , Yakuwa, Yamagata pref.	2	20	75	—	—	+	—	—	" , "	" , "
61	" , Suganodai, " "	1	45	45	—	—	+	—	—	" , "	" , "
\$ Cretaceous Period											
—	Dolerite, Nemuro, Hokkaidō, N-2	—	83	-46	9	—	+	52	128	NRM, A, TD	15
—	" , " , " , N-5	—	-72	69	7	—	M	25	112	" , " , "	"

Age (my.)	Site and Materials	N	I	D	c_{95}	k	P	VPP		Remarks	References
								Lat.	Long.		
—	Tuff, Ōshima, Iwate pref. O-4	—	-41	2	18	—	M	-28	-140	NRM	17
\$ Mesozoic Period											
—	Inkstone, Yamaguchi pref.	—	67	54	18	—	+	47	-164	"	10
—	Quartz porphyry, "	—	68	59	23	—	+	43	-163	"	"
—	Serpentine, Miyamori, Iwate pref.	7	51	-4	9	43	+	—	—	"	26
—	Gabbro, Tōno, Iwate pref.	9	58	-106	7	57	M	—	—	"	"
—	Serpentine, " , "	5	57	-28	17	22	+	—	—	"	"
—	Granite, Hitokabe, Iwate pref.	10	74	-32	16	10	+	—	—	"	"
—	" , Yamaya, "	12	53	-28	8	33	+	—	—	"	"
—	Granodiorite, Takata, "	12	56	-1	9	24	+	—	—	"	"
—	Granite, Kinkazan, Miyagi pref.	10	53	57	9	30	+	—	—	"	"
—	Gabbro, Tōno, Fukushima pref.	10	38	-53	10	23	+	—	—	"	"
—	Gabbro, Nakoso, "	12	51	-53	7	45	+	—	—	"	"
—	Serpentine, Sasakuri, Fukuoka pref.	9	55	29	17	13	+	—	—	"	"
—	Granite, Ishigoshi, Okayama pref.	10	42	-6	7	48	+	—	—	"	"
—	Granodiorite, Nijō, Shimane pref.	15	38	34	15	8	+	—	—	"	"
\$ Paleozoic Period											
(Permian-Triassic Boundary)											
—	Serpentine, Kohse, Nara pref.	7	35	74	4	266	+	—	—	"	"
—	Gabbro, Sakurai, "	7	43	52	12	28	+	—	—	"	"
—	" , Taki, Mie pref.	5	56	9	4	307	+	—	—	"	"
—	Granodiorite, Nihama, Ehime pref.	10	40	13	18	8	+	—	—	"	"
—	— , Kitakami mountain, Iwate pref.	13	39	12	—	—	+	65	-67	"	48
(Carboniferous)											
—	Tuffaceous shale, Akiyoshidai, Yamaguchi pref.	—	27	-155	—	—	M	—	—	"	12
—	— , Kitakami mountain, Iwate pref.	25	39	8	15	—	+	71	-63	"	48
(Devonian)											
—	Tuff, Kitakami mountain, Iwate pref.	8	64	71	—	—	+	39	-160	"	48

Acknowledgment

The author expresses his thanks to all of investigators referred in the table. They replied and gave willingly all the available data irrespective of published or unpublished till now upon inquiries of the present author. He owes greatly the present successful collection of data to all of them.

Request from the Author

The tables presented here may not be complete due to lack of data. It is considered that there must be much more data unpublished and/or over-looked by the present author. Therefore, for the completion of tables the present author would much appreciate if any data which are failed to appear here will be forwarded to him.

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Addendum

Thorough paleomagnetic studies on normal and reverse successions in sedimentary rocks of Tertiary and Quaternary periods are referred to in a paper; in Nakagawa, H., N. Niitsuma and I. Hayashi, Late Cenozoic geomagnetic chronology of the Bōsō peninsula, *Chishitsugaku Zasshi*, 75, 267-280, 1969. More detailed study on the normal reverse boundaries of Tertiary and Quaternary periods is referred to in a paper; Ito, H., Polarity transitions of the geomagnetic field deduced from the natural remanent magnetization of Tertiary Quaternary rocks in southwest Japan, *J. Geomag. Geoelectr.* 22, 273-290, 1970.

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* Annual Progress Report of the Rock Magnetism Research Group in Japan.

** Annual Progress Report of Palaeogeophysics Research Group in Japan.