

LAND GEOMAGNETIC SURVEYS ON ISLANDS

This is a report of geomagnetic surveys on islands conducted by the Hydrographic and Oceanographic Department (JHOD) in 2001 and 2002. This report compiles the results of land geomagnetic surveys carried out at Kuchierabu-jima, Izu O-shima and Nakanoshima.

Key word : geomagnetic survey

1. Surveys

Kuchierabu-jima

The total magnetic intensity was observed by a proton magnetometer on the magnetic stations. The accuracy of the magnetometer is 1 nano-tesla.

The observation values of total magnetic intensity are shown in Table 1.

The distribution of magnetic survey points is shown in Fig. 1 .

Izu O-shima

The absolute values of dip (magnetic inclination) were observed by a MAG-01H magnetometer on the magnetic stations.

The observation values of dip are shown in Table 2.

The distribution of magnetic survey points is shown in Fig. 2.

Nakanoshima

The total magnetic intensity was observed by a GSM-19GS magnetometer on the magnetic stations. The accuracy of the magnetometer is 0.1 nano-tesla.

The observation values of total magnetic intensity are shown in Table 3.

The distribution of magnetic survey points is shown in Fig. 3.

Compilation of this report was made by K. Onodera and N. Seo of Geodesy and Geophysics Office.

Reference

The results of land magnetic surveys on islands for preceding years are found in the following publications.

Data Report of Hydrographic Observations, Series of Astronomy and Geodesy, No. 27 March 1993,
Data Report of Hydrographic Observations, Series of Astronomy and Geodesy, No. 31 March 1997,

Table 1 The observation values of total magnetic intensity in Kuchierabu-jima

Strn.	Date			Time		Latitude			Longitude			Obs.	anomaly
No. 1	2001	11	28	0	10	30	27	36	130	11	44	46452	309
No. 2	2001	11	28	0	55	30	27	24	130	12	1	46940	-36
No. 3	2001	11	28	1	40	30	26	56	130	12	8	46435	315
No. 4	2001	11	28	2	34	30	26	25	130	12	3	45627	-480
No. 5	2001	11	28	4	31	30	26	0	130	11	56	46605	488
No. 6	2001	11	28	6	23	30	26	20	130	13	49	45241	-893
No. 7	2001	11	28	6	46	30	26	36	130	14	27	45818	-319
No. 8	2001	11	28	7	7	30	26	57	130	14	59	46225	87
No. 9	2001	11	28	7	28	30	26	29	130	14	55	46270	136
No. 10	2001	11	28	8	51	30	27	51	130	14	1	46180	27
No. 11	2001	11	28	23	37	30	28	16	130	11	57	45928	-236
No. 12	2001	11	29	0	19	30	28	8	130	12	45	46460	-107
No. 13	2001	11	29	0	57	30	27	15	130	13	51	45766	-366
No. 14	2001	11	29	2	19	30	28	43	130	10	23	46920	-60
No. 15	2001	11	29	3	5	30	28	6	130	10	30	46189	44
No. 16	2001	11	29	4	32	30	27	23	130	10	44	46173	33
No. 17	2001	11	29	8	27	30	28	14	130	13	10	46304	145

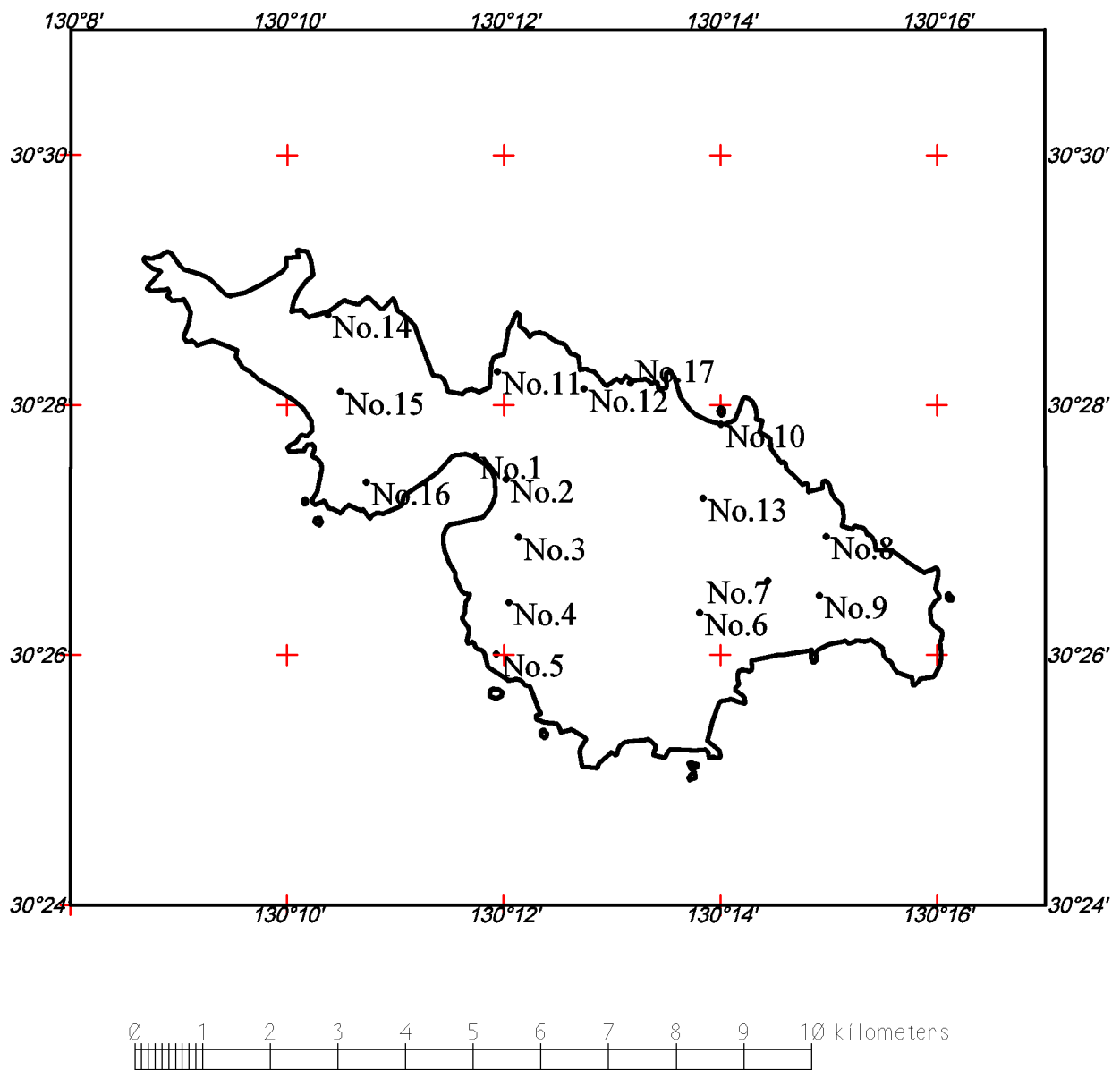


Fig. 1 The distribution of magnetic survey points in Kutierabu-jima.

Table 2 The observation values of dip in Izu O-shima

Stn.	Latitude		Longitude		Date of Observation	Dip		
A1	34	46.9	139	22.7	March 13 2002	49	59	12
A2	34	45.8	139	22.7	March 14 2002	54	43	22
A3	34	45.0	139	24.3	March 16 2002	42	24	51
A4	34	44.4	139	26.9	March 15 2002	48	47	38
A5	34	40.6	139	26.6	March 17 2002	50	09	44
A6	34	43.4	139	21.4	March 18 2002	47	01	05
A7	34	43.8	139	23.3	March 16 2002	50	47	20
A9	34	45.0	139	22.4	March 16 2002	48	03	02
A10	34	45.0	139	22.6	March 18 2002	48	56	30
A11	34	45.7	139	21.2	March 13 2002	48	44	53
B2	34	46.9	139	24.7	March 15 2002	45	31	36
B3	34	46.2	139	24.1	March 15 2002	47	45	45
B4	34	45.6	139	24.9	March 16 2002	50	20	19
B5	34	45.2	139	26.5	March 15 2002	49	13	58
B6	34	43.5	139	26.2	March 17 2002	49	07	02
B7	34	42.6	139	26.2	March 17 2002	50	59	12
B8	34	41.8	139	26.0	March 14 2002	48	55	27
B9	34	41.7	139	26.7	March 14 2002	48	34	45
B10	34	41.6	139	25.3	March 14 2002	49	27	43
B11	34	41.5	139	23.9	March 17 2002	47	28	06
B12	34	42.1	139	21.8	March 17 2002	47	23	28
B13	34	42.8	139	22.2	March 17 2002	52	25	45
B14	34	45.2	139	23.6	March 16 2002	51	49	25

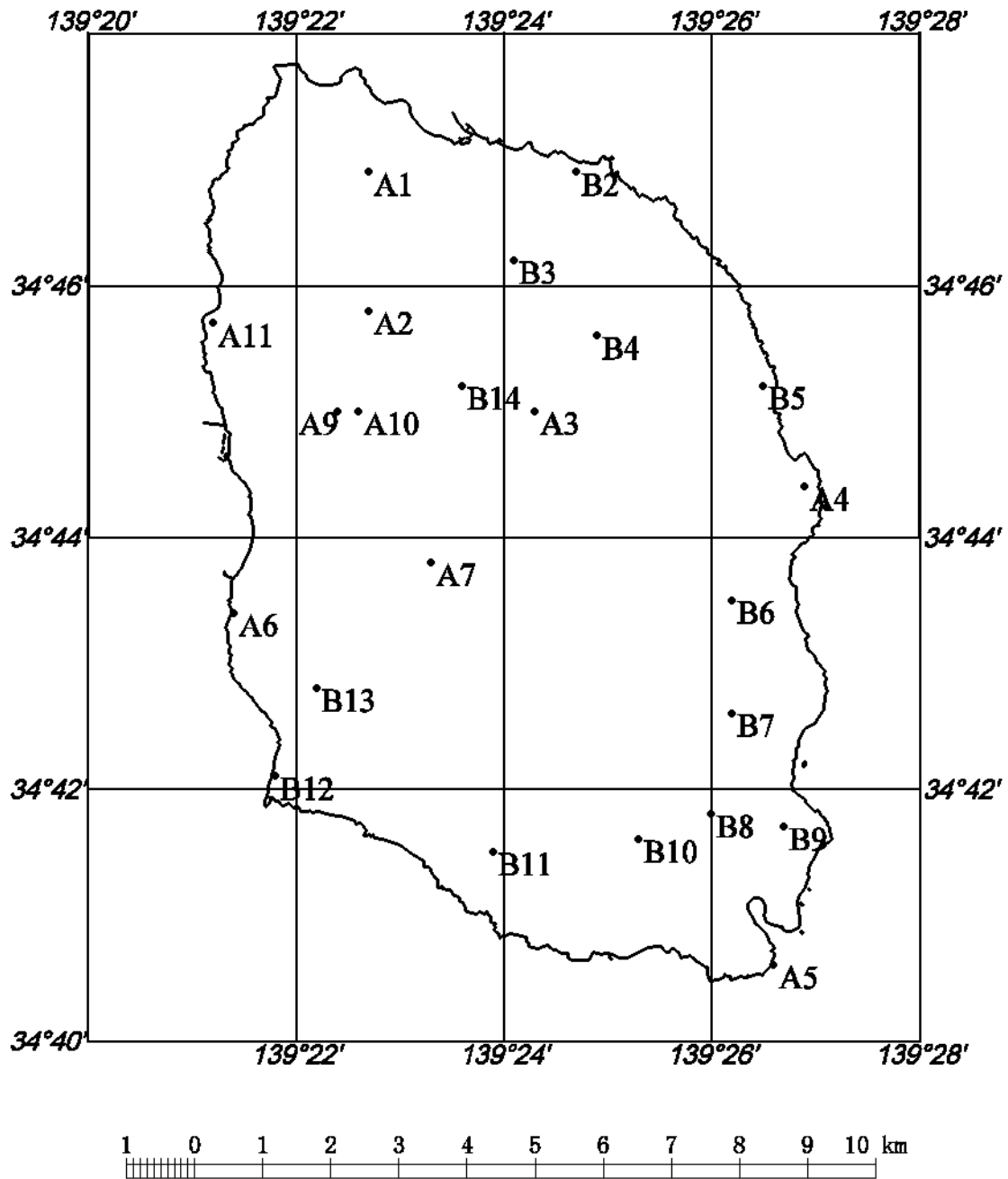


Fig. 2 The distribution of magnetic survey points in Izu O-shima.

Table 3 The observation values of total magnetic intensity in Nakanoshima

Strn.	Date			Time		Latitude			Longitude			Obs.	anomaly
No. 1	2002	10	26	01	32	29	50	27	129	50	50	46658.6	751.9
No. 2	2002	10	26	02	04	29	50	54	129	50	44	46748.8	840.5
No. 3	2002	10	26	02	20	29	51	40	129	50	50	47140.5	1227.5
No. 4	2002	10	26	02	43	29	51	58	129	50	53	46349.9	428.4
No. 5	2002	10	26	03	31	29	50	12	129	52	06	46191.7	305.7
No. 6	2002	10	26	04	23	29	52	19	129	51	13	46033.2	128.9
No. 7	2002	10	26	04	38	29	52	21	129	51	34	45398.7	-516.4
No. 8	2002	10	26	04	55	29	52	07	129	52	06	45789.6	-127.1
No. 9	2002	10	26	05	26	29	51	28	129	52	57	47081.2	1160.2
No. 10	2002	10	26	06	04	29	51	14	129	52	59	45505.2	-408.5
No. 11	2002	10	26	06	20	29	50	35	129	52	49	46010.1	96.7
No. 12	2002	10	26	07	00	29	50	09	129	53	37	46114.6	220.6
No. 13	2002	10	26	07	25	29	50	17	129	53	58	46181.1	292.4
No. 14	2002	10	26	07	48	29	49	06	129	54	18	46097.9	209.6
No. 15	2002	10	26	08	10	29	49	21	129	54	58	46038.5	153.8
No. 16	2002	10	27	00	13	29	48	58	129	52	47	46520.3	628.6
No. 17	2002	10	27	00	30	29	49	12	129	52	05	45520.5	-370.4
No. 18	2002	10	27	00	38	29	49	18	129	52	04	45506.9	-384.0
No. 19	2002	10	27	00	55	29	49	23	129	52	20	46126.6	238.1
No. 20	2002	10	27	02	32	29	51	13	129	51	37	46477.3	560.8
No. 21	2002	10	27	04	15	29	50	19	129	51	21	45721.0	-173.4
No. 22	2002	10	28	00	15	29	49	37	129	51	41	45494.0	-387.5
No. 23	2002	10	28	01	00	29	49	39	129	51	57	45975.7	96.0
No. 24	2002	10	28	01	45	29	49	55	129	51	46	45626.8	-257.1
No. 25	2002	10	28	02	30	29	49	33	129	51	30	45458.7	-409.0
No. 26	2002	10	28	05	50	29	50	47	129	51	22	46192.6	288.9
No. 27	2002	10	28	06	45	29	50	28	129	50	48	45932.0	22.8

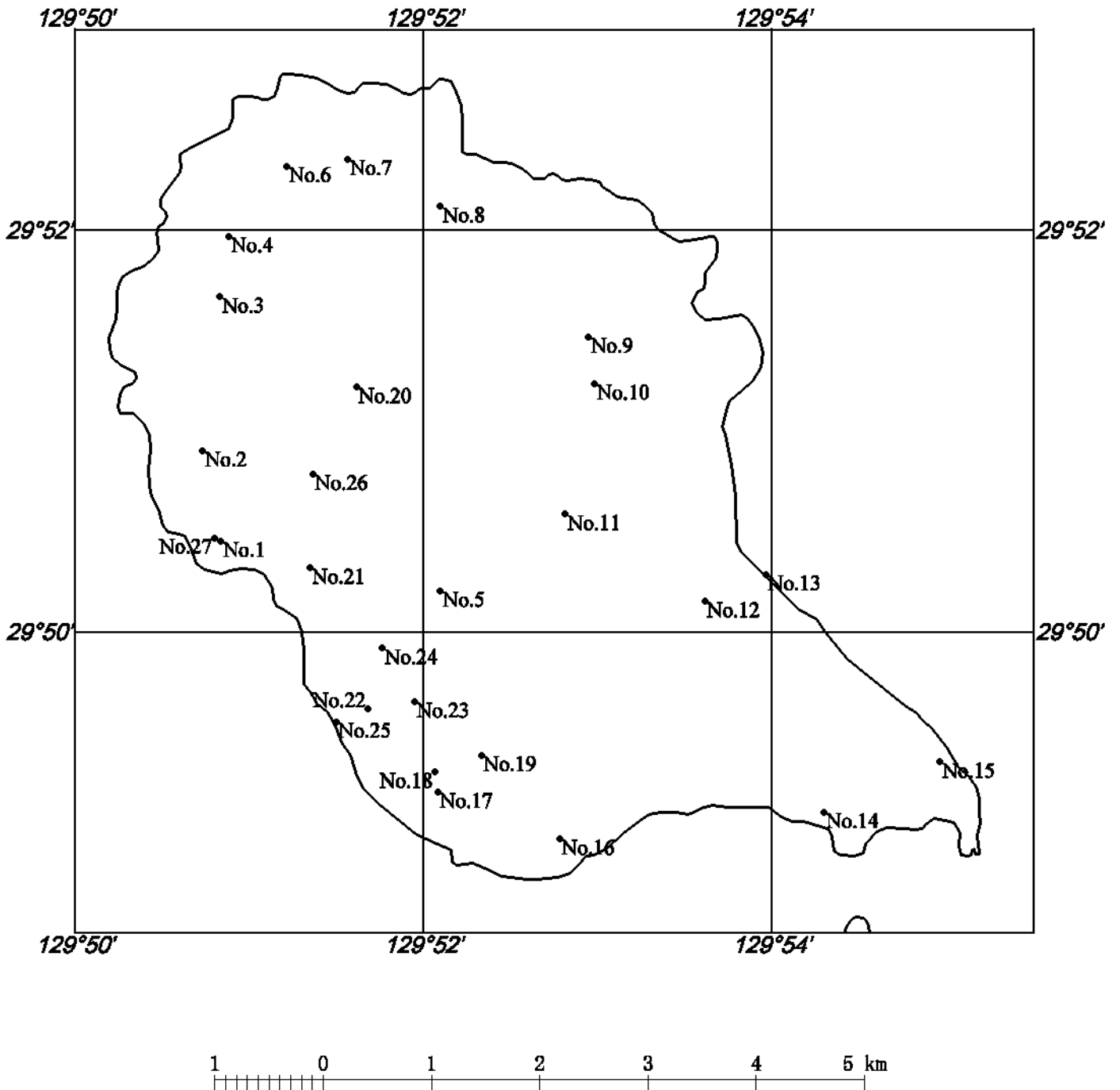


Fig. 3 The distribution of magnetic survey points in Nakanoshima