

I. OUTLINE OF GLACIOLOGICAL TRAVERSE IN 1973-1974

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This volume of reports presents data obtained by the oversnow traverse party of the 14th Japanese Antarctic Research Expedition (JARE-14) in 1973-1974. The traverse party of JARE-14 conducted researches in Mizuho Plateau, East Antarctica, according to the "Glaciological Research Program in Mizuho Plateau - West Enderby Land". This program extended over a period from 1969 to 1975 (from JARE-10 to the summer party of JARE-16). The results of basic observations and surveys carried out by JARE-10 and -11 in 1969-1971 were published in JARE Data Reports No. 17 (Ishida, ed., 1972) and those by JARE-12 and -13 in 1971-1973 were in No. 27 (Shimizu, ed., 1975), as Part 1 and Part 2 of the program.

The JARE-14 was in charge of the resurvey of the triangulation chain installed by JARE-10 in 1969, and some glaciological, meteorological and geophysical observations in Mizuho Plateau. A total of five oversnow traverses was carried out by JARE-14: four traverses were made from Syowa Station to Mizuho Camp in January, April, August, and September-October 1973; one major traverse was from Syowa Station to the Yamato Mountains via Mizuho Camp in November 1973-February 1974 (see Table 1). Personnel and their assignments are listed in Tables 2 and 3; the items of observations are in Table 4. Figure A shows the traverse routes covered by JARE-14; nine subdivided routes, namely, routes S, H, Z, M, X, C, D, N, and A, are summarized in Table 5.

Compiled in this volume are the following data of observation: position and elevation of all stations; thickness of the ice sheet by a

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radio echo sounder; 10 m snow temperature at four stations; surface movement of the ice sheet at 142 stations along the parallel of 72°S from 36°E to 43°E; surface slope of the ice sheet; net accumulation of snow by stake measurements; surface meteorological data; gravity and geomagnetism (the declination and inclination). Detailed results and scientific discussions on the individual research work will be presented separately in other publications.

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References

- Ishida, T. (1972): Glaciological research program in Mizuho Plateau - West Enderby Land, Part 1, 1969-1971. JARE Data Rep., 17 (Glaciology), 217 pp.
- Shimizu, H. (1975): Glaciological research program in Mizuho Plateau - West Enderby Land, Part 2, 1969-1973. JARE Data Rep., 27 (Glaciology), 235 pp.

Table 1. Oversnow traverses carried out by JARE-14, 1973-1974.

Period	Traverse route	Distance	Number of personnel	Oversnow vehicles
15-29 January 1973	Syowa Station - Mizuho Camp - Syowa Station	600km	4	KD60 (Diesel engine, 7 ton):1 KC20 (Gasoline engine, 2.5 ton): 2
1 -30 April 1973	Syowa Station - Mizuho Camp - Syowa Station	600	8	KD60 : 1 KC20 : 2
10-30 August 1973	Syowa Station - Mizuho Camp - Syowa Station	600	8	KD60 : 3 KC20 : 1
10 September - 14 October 1973	Syowa Station - Mizuho Camp - (69°42'S, 44°17'E) - - Syowa Station	700	5	KD60 : 2 KC20 : 1
10 November 1973 - 2 February 1974	Syowa Station - Mizuho Camp - Yamato Mountains - (72°00'S, 43°10'E) - Mizuho Camp - Syowa Station	1500	10	KD60 : 2 KC20 : 2

Table 2. Personnel participated in the oversnow traverses of JARE-14, 1973-1974.

Name	Assignments
Renji Naruse	Leader; glaciology.
Shun'ichi Kobayashi	Meteorology; glaciology.
Kotaro Yokoyama	Glaciology; radio echo sounding; radio communication.
Yoshiaki Abe	Geodetic survey; gravity; geomagnetism.
Masayuki Kuwashima	Geomagnetism.
Kazuyuki Shiraishi	Geology; navigation.
Hitoshi Shirane	Medical officer; radio communication.
Shigeo Shiga	Mechanic.
Yoshinori Murayama	Mechanic.
Masaru Ayukawa	Field assistant.
Sadao Takeuchi	Mechanic; radio communication.
Kunio Shimano	Field assistant; mechanic.
Iwao Ishii	Mechanic.
Yasuo Takahashi	Field assistant.
Nobutaka Nemoto	Cook.

Table 3. Personnel at Mizuho Camp from 20 August to 6 October 1973.

Name	Assignments
Hitoshi Shirane	Leader; medical officer; radio communication.
Shun'ichi Kobayashi	Meteorology.
Kotaro Yokoyama	Glaciology; logistics; radio communication.
Masayuki Kuwashima	Geomagnetism; VLF.
Yoshinori Murayama	Mechanic.

Table 4. Items of observations conducted by JARE-14, 1973-1974.

Items	Location	Chief observer
1. Position and elevation	Traverse routes	Naruse
2. Ice thickness	Traverse routes	Yokoyama
3. Ice movement	Route A	Naruse
4. Net accumulation	Traverse routes	Yokoyama
5. Meteorology	Traverse routes	Kobayashi
6. Katabatic wind	Mizuho Camp and Yamato Mountains	Kobayashi
7. Drifting snow	Mizuho Camp and traverse routes	Kobayashi
8. 10 m snow temperature	Traverse routes	Naruse
9. 3 components of geomagnetism	Mizuho Camp and Yamato Mountains	Kuwashima
10. Inclination and declination of geomagnetism	Traverse routes	Abe
11. VLF emission	Mizuho Camp	Kuwashima
12. Gravity	Traverse routes	Abe
13. Snowquake	Mizuho Camp and Yamato Mountains	Kuwashima
14. Terrestrial survey	Yamato Mountains	Abe
15. Geology	Yamato Mountains	Shiraishi
16. Collection of meteorites	Yamato Mountains	Shiraishi

Table 5. Denomination of the routes travelled by JARE-14, 1973-1974.

Name of routes	Station	Station intervals	Remarks
	from to		
Route S	S16 (Mikaeri Terrace) S122; S169 S240.	2 km	set up in 1967 (by JARE-8).
H	S30, H0,, H306, S122.	0.3 or 0.5 km	set up in 1971 (by JARE-12).
Z	S122, Z1, Z104, Mizuho Camp.	0.5 or 1 km	set up in 1970 (by JARE-11).
M	Z16, M1,, M79, H184.	2 km	set up in 1973 (by JARE-14).
X	Mizuho Camp, X1,, X19, S169.	2 km	set up in 1971 (by JARE-11).
C	C0 (between massifs D and E of the Yamato Mts.), C149, S169.	2 km	set up in 1970 (by JARE-10).
D	D0 (between massifs E and G of the Yamato Mts.) .., D37, B12 (massif A of the Yamato Mts.)	2 km	set up in 1973 (by JARE-14); approximately parallel to route B set up in 1970 (by JARE-10).
N	N0 (West side of massif B of the Yamato Mts.), N23, B12.	2 km	set up in 1973 (by JARE-14).
A	A001,, A164 (S240).	from 2 km to 6 km	Triangulation chain installed in 1969 (by JARE-10).