

## INTRODUCTION

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This volume presents data obtained by the glaciological oversnow traverse party of the 15th Japanese Antarctic Research Expedition (JARE-15) in 1974 - 1975 together with some additional results of JARE-14. This is the fourth report of the "Glaciological Research Program in Mizuho Plateau-West Enderby Land". The results of glaciological research carried out by JARE-10 to JARE-14 were published in JARE Data Reports No.17 (Ishida, ed., 1972), No. 27 (Shimizu, ed., 1975) and No. 28 (Naruse, ed., 1975), as Part 1, Part 2 and Part 3 of the program data report, respectively.

Major glaciological activities by JARE-15 were two long survey traverses from Mizuho Camp, one southward to station I 600 ( $77^{\circ}00'18''S$ ,  $48^{\circ}02'44''E$ ; 3,408 m above sea level) in October-November 1974 and the other eastward to Sandercock Nunataks in December 1974 - January 1975, the former being designated as Highland Traverse and the latter Sandercock Traverse. To prepare for them and also to install drilling machineries to be used by JARE-16 at Mizuho Camp, JARE-15 occupied Mizuho Camp from January 1974 to February 1975 though intermittently and made five round trips between Syowa Station and Mizuho Camp in January, March, May, August-September and November 1974 for logistic support.

Items of glaciological observation during the survey traverses will be described in detail in Chapter I of the present report. Between Syowa Station and Mizuho Camp, such items as (1) measurements of snow accumulation by stake method, (2) sampling of drifting snow for oxygen isotope analysis and (3) observations of surface condition were carried out. On the other hand, the main items at Mizuho Camp were: (1) measurements of net accumulation by means of stake farms, (2) observation of drifting snow, (3) stratigraphical and morphological observations of snow, (4) continuous recording of air temperature, atmospheric pressure, and wind speed and direction and (5) sampling of drifting snow for oxygen isotope analysis.

Operational aspects of glaciological activities by JARE-15 are summarized in Fig. A and Tables 1 thru 6. A word must be said about the route name Y'. Route Y, running straight from Mizuho Camp to Station Y 200 and then turning toward Sandercock Nunataks, was established in 1970 by JARE-11. However, they left no station marks between Mizuho Camp and Y 200. JARE-15 traced Route Y to Y 200 and set new stations, which are designated as Y' stations.

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Hence, the part up to Y 200 of Route Y is called Route Y' (Fig. 1).

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#### References

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Table 1. List of traverse routes covered by JARE-15.

Name of route	Station from.....to	Station interval	Year and party installed
Route S	S 16 (Mikaeri Terrace) .....S 122	2 km	1967; JARE-8
H	S 30, H 0..H 306, S 122	0.3 or 0.5 km	1971; JARE-12
Z	S 122, Z 1....Z 104, Mizuho Camp	0.5 or 1 km	1970; JARE-11
Y'	Mizuho Camp, Y'5... .....Y'210, Y 200	5 km	1974; JARE-15 Route Y (1970; JARE-11)
I	Y 200, I 5.....I 600	5 km	1974; JARE-15
J	I 365, J 5...J 480, Y 20	5 km	1974; JARE-15
W	Mizuho Camp, W 375... .....W 00.	(W375-W200) 5 km	1971; JARE-11

Table 2. Summary of traverses between Syowa Station and Mizuho Camp.

Period(1974)	Purpose and personnel	Type and number of oversnow vehicles
17 January to 5 February	Take-over of Mizuho Camp and construction of airstrip. Okitsugu Watanabe, the leader (L) and glaciologist (G), and two persons	KC20(Gasoline engine, 2.5 ton): 1
7 March to 31 March	Construction of a new hut(laboratory) and logistic supply. Okitsugu Watanabe(L, G), Kazuhide Satow (G), Masayuki Inoue(G), and 8 persons	KD60(Diesel engine, 7 ton): 2 KC20: 1
26 April to 26 March	Transportation of drilling machineries and construction of a drilling site. Nozomi Murakoshi(L), Kazuhide Satow(G), Masayuki Inoue(G), and 4 persons	KD60: 3
26 August to 9 September	Replacement of personnel and logistic supply. Kei Terai(L), Kazuhide Satow(G), Masayuki Inoue(G), and 5 persons	KD60: 2
14 November to 4 December	Transportation of drilling machineries. Takashi Ikarashi(L) and 3 persons	KD60: 1 KC20: 1

Table 3. Personnel roster at Mizuho Camp.

Period(1974-1975)		Personnel at Mizuho Camp	
		Name	Assignment
19	January, 1974 to	Okitsugu Watanabe	Leader, glaciology
		Yasuhisa Yonezawa	Mechanics
2	February	Yuji Yasutomi	Meteorology
		Masafumi Igarashi	Radio communication
13	March to	Okitsugu Watanabe	Leader, glaciology
		Kei Terai	Logistics
19	April	Isao Fujii	Medical officer
20	April to	Takashi Ikarashi	Leader, mechanics
		Kazuhide Satow	Glaciology
4	September	Masayuki Inoue	Glaciology
18	November to	Takashi Ikarashi	Mechanics
		Kazuhide Satow	Glaciology
5	February 1975	Isao Fujii	Medical officer
		Okitsugu Watanabe	Glaciology
		Masayuki Inoue (JARE-16)	Glaciology
		Takatoshi Takizawa	Glaciology
		Takeshi Kurokawa	Logistics

Table 4. Itinerary and summary of operation of Highland Traverse.

Period	Travel	Operation
October		
1	Left Syowa Station	Number of personnel: 6
11	Arrived Mizuho Camp	Oversnow vehicles: KD60: 2 KC20: 1(left at Mizuho Camp)
14	Left Mizuho Camp	Distance of traverse: Syowa Station to Mizuho Camp: 300km
24	Arrived Y200	Round traverse to I 600 from Mizuho
27	Left Y200	Camp via Y 200 and I 365: 1550km
November		
6	Arrived I 365	Total distance for Highland Traverse: 1850km
11	Arrived I 600	
16	Arrived I 365	Stopover more than one day for
17	Left I 365 (Route J)	observation: Y'100(17 Oct.); Y'210& Y200(25-26 Oct.); I 235(2 Nov.);
29	Arrived Mizuho Camp	I 485(9 Nov.); I 600(12 Nov.); J 225(22 Nov.); J 364(26 Nov.);

Table 5. Itinerary and summary of operation of Sandercock Traverse.

Period	Travel	Operation
December		
14	Left Mizuho Camp (Route W)	Number of personnel: 4 Oversnow vehicles: KD60: 1
18	Arrived W 55 (Station W 00 was set at Sandercock Nunataks in December 1970)	KC20: 1 Distance of traverse: 700km Stopover more than one day for observation: W 55 (19-21 Dec.); W 32 (28 Dec.); W 46 (31 Dec.); W 280 (5 Jan. 1975)
22	Left W 55	
24	Arrived W 28	
27	Left W 28	
January 1975		
1	Arrived W 55	
7	Arrived Mizuho Camp	

Table 6. Personnel participated in the oversnow traverses of JARE-15, 1974 - 1975.

Name	Assignments
(Highland Traverse)	
Okitsugu Watanabe	Leader; glaciology
Kazuhide Satow	Glaciology; geodetic survey
Masayuki Inoue	Glaciology; meteorology
Yasuhisa Yonezawa	Mechanics
Isao Fujii	Medical officer
Shigekazu Inamura	Radio communication; mechanics
(Sandercock Traverse)	
Okitsugu Watanabe	Leader; glaciology; seismic sounding
Masayuki Inoue	Glaciology; meteorology
Yasuhisa Yonezawa	Mechanics
Masafumi Igarashi	Radio communication

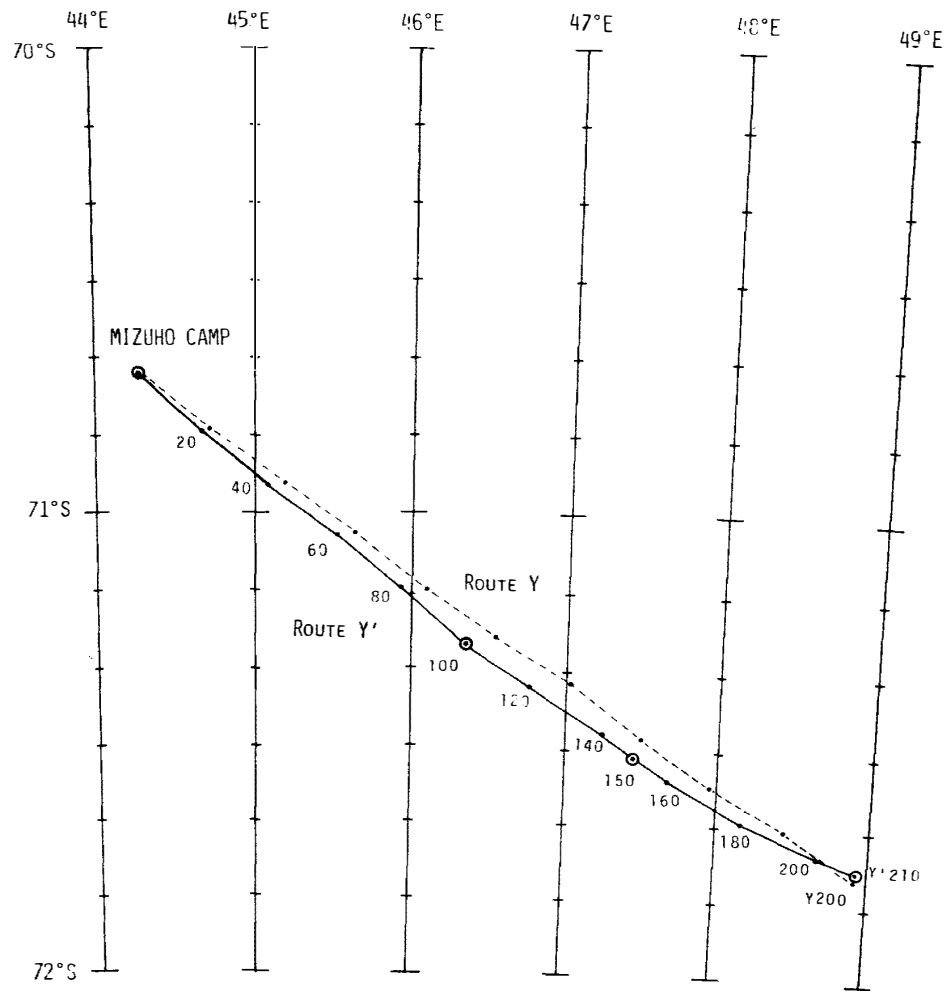


Fig. 1. Route Y'