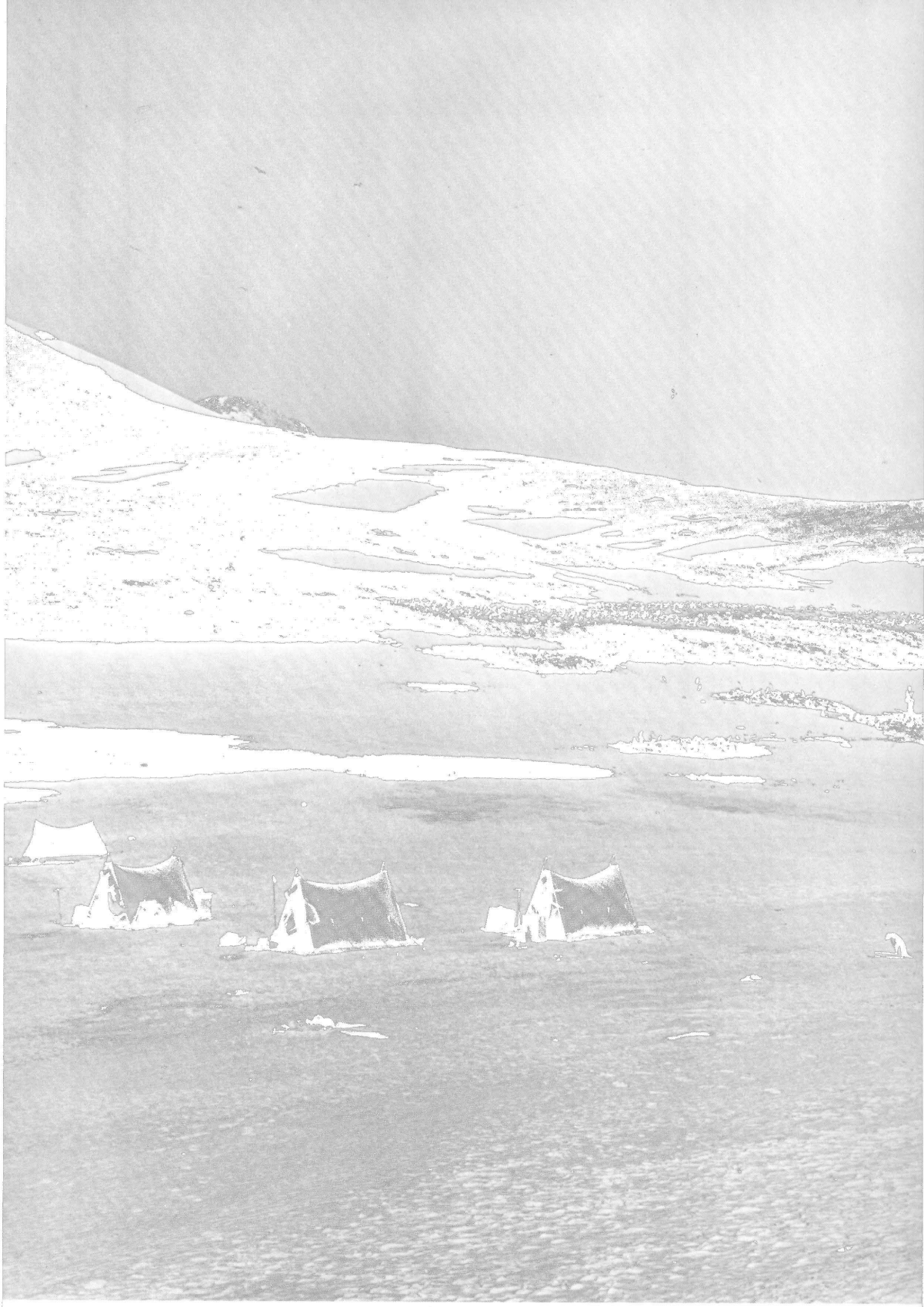
ANTARCTIC REPORT



U.S. ANTARCTIC RESEARCH PROGRAM

NATIONAL SCIENCE FOUNDATION

NOV. 1964

CONTENTS

Communications regarding the Antarctic Report should be addressed to the Office of Antarctic Programs, National Science Foundation, Washington, D. C., 20550.

ANTARCTIC CARTOGRAPHIC MATERIALS
ACQUISITIONS LIST NO. 4

The Acquisitions List of Antarctic Cartographic Materials, previously issued through the Office of Coordinator for Maps, Department of State, will continue as part of the Antarctic Report, retaining its consecutive numbering system begun in 1961. The Office of Coordinator for Maps will continue to prepare the list from contributions made to that Office by participating organizations or agencies of the United States who forward information pertinent to antarctic cartography which they have either received or produced. Organizations or individuals desiring to participate in this program are invited to communicate with Dr. Arthur L. Burt, Coordinator for Maps, INR/M, Department of State, Washington, D. C., 20520. New lists will appear as the volume of materials warrants. Materials included in this issue were received prior to May 15, 1964.

The list is separated into four categories: (1) Gazetteers (2) Geodetic Data (3) Maps and Charts and (4) Photography.

Requests for additional copies of this list should be addressed to the Office of Antarctic Programs, National Science Foundation, Washington, D. C., 20550. Requests for specific items should be directed to the respective holding organizations, designated in the list by the initials following the item. Requests should refer to the number of the list and that of the item.

ACIC Aeronautical Chart and Information Center

Mr. Gordon Amundsen
2nd and Arsenal Streets
St. Louis, Missouri, 63118

or

Mr. Clyde Henning (ACWSG-1)
1221 South Fern Street
Arlington, Virginia, 12102

AGS American Geographical Society

Broadway at 156th Street
New York, New York, 10032

APO U.S. Antarctic Projects Officer

801 19th Street, N. W.
Washington, D. C., 20305

DCL — Dartmouth College

Baker Library
Hanover, New Hampshire

GPRC — Geophysical and Polar Research Center

Mr. Ned A. Ostenso
University of Wisconsin
6021 South Highland Road
Madison, Wisconsin

GS — Geological Survey

Mr. William Crawford
Branch of Special Maps
Topographic Division
Washington, D. C., 20900

INT/G — Office of Geography

Mr. Fred G. Alberts
Department of the Interior
Washington, D. C., 20240

LC — Library of Congress

Mr. Richard W. Stephenson
Map Division
Washington, D. C., 20540

NAVOCEANO — Naval Oceanographic Office

Chart Maintenance Branch
Washington, D. C., 20390

NSF — National Science Foundation

Mr. Walter Seelig
Office of Antarctic Programs
Washington, D. C., 20550

Geographic names or their spelling do not necessarily reflect recognition of political status of an area by the United States Government.

GAZETTEERS

1. Antarctic Names Committee of Australia.
Provisional gazetteer of the Australian Antarctic territory. [Melbourne] 1961. 96 p. 8 x 10 in. (Its Paper 61/2). INT/G GS

2. Gt. Brit. Foreign Office. Research Dept. Antarctic Place-Names Committee. Gazetteer of the British Antarctic territory, South Georgia and the South Sandwich Islands. London, Her Majesty's Stationery Office, 1962. GS INT/G 183rg.G79g

3. New Zealand. Geographic Board.
Provisional gazetteer of the Ross Dependency. Wellington, Government Printer, 1958. 164 p. INT/G 180r.N42p

Compiled by A. S. Helm.

4. ---- ---- Supplement. [n.p.] 1960. 30 p. 9 x 14 in. INT/G 180r.N42p

5. ---- ---- Second supplement. [n.p.] 1963. 53 p. INT/G 180r.N42p

6. ---- ---- Third supplement. [n.p.] 1963. 32 p. INT/G 180r.N42p

7. U.S. Board on Geographic Names.
Geographic names of Antarctica. Washington, D.C., 1956. 332 p. (Its Gazetteer no. 14). INT/G

8. ---- ---- Supplement. [Washington, D.C.] 1963. 23 p.
Supplementary lists reprinted from U.S. Antarctic Projects Officer, Bulletin, v. 2, no. 3, Nov. 1960; v. 2, no. 7, March 1961; v. 3, no. 1, Sept. 1961; v. 3, no. 6, Feb. 1962; v. 4, no. 3, Dec. 1962. INT/G

9. ---- ---- [Supplement] [Washington, D.C., 1964] [9] p.
Published in U.S. Antarctic Projects Officer, Bulletin, v. 5, no. 8, April 1964. INT/G

GEODETIC DATA

	AREA	DATE	TYPE	POINTS	HOLDING ORGANIZATION
10.	Beardmore Glacier-Axel Heiberg Glacier 84 24 - 85 39 S 169 14 E - 167 30 W Typed lists, size 8 x 11 in. Photo-identified on aerial photos. Estab. by New Zealand. Dept. of Lands and Survey.	1961-62	Horizontal & Vertical	16	GS
11.	Britannia Range 79 02 - 81 54 S 153 02 - 161 57 E Printed list & diagram, size 8 x 11 in. Photo-identified on aerial photos. Estab. by USGS.	1961-62	Horizontal & Vertical	31	GS
12.	Cape Parr-Nimrod Glacier 81 21 - 82 51 S 153 02 - 165 18 E Typed lists, size 8 x 11 in. Photo-identified on aerial photos. Estab. by New Zealand. Dept. of Lands and Survey.	1960-61	Horizontal & Vertical	40	GS
13.	Crary Mountains and Toney Mountain 75 20 - 76 57 S 110 43 - 118 03 W Ozalid of typed list, 8 x 11 in. Estab. by USGS.	Jan. 18, 1961	Horizontal & Vertical	28	GS
14.	Ellsworth Land 73 20 - 75 35 S 66 30 - 94 30 W Antarctic Peninsula traverse elevations by John C. Behrendt. Typed list (3 p.) size 8 x 11 in.	1961-62	Vertical	272	GS

	AREA	DATE	TYPE	POINTS	HOLDING ORGANIZATION
15.	Ellsworth Land 73 29 S - 94 25 W 74 04 S - 66 35 W Copy of typed list (2 p.), size 8 x 10 in. USARP Antarctic Peninsula traverse.	1962	Horizontal (traverse positions)	48	GS
16.	Enderby Land - Wilkes Land 66 69 S - 50 63 E 66 69 S - 110 113 E In Mather, K. B. "Further observations on sastrugi, snow dunes, and the pattern of surface winds in Antarctica", Polar record, v. 11, no. 71, May 1962. Size 8 x 10 in. Not photo-identifiable.	May 1962	Horizontal & Vertical	69	GS
17.	Filchner Ice Shelf 77 40 - 82 35 S 36 50 - 68 55 W In Behrendt, John C. "Summary & discussion of the geophysical and glaciological work in the Filchner Ice Shelf area of Antarctica." Wisconsin University. Geophysical and Polar Research Center. Research report no. 62-3, Apr. 1962. Size 9 x 11 in.	1957-58	Horizontal & Vertical	224	GS
18.	Heritage Range 79 33 S - 82 32 W 79 09.3 S - 83 37 W Size 10 x 10 in. Photo-identified. Estab. by USARP; compiled by John Spletstoesser, University of Minnesota.	1962	Horizontal	2	GS

	AREA	DATE	TYPE	POINTS	HOLDING ORGANIZATION
19.	Horlick Mountains 84 54 - 85 25 S 86 42 - 90 53 W Ozalid of typed list, size 8 x 11 in. Photo-identified on aerial photos. Estab. by USGS.	1960-61	Horizontal & Vertical	38	GS
20.	Hudson Mountains 74 12 - 74 47 S 99 05 - 100 03 W Ozalid of typed list, size 8 x 11 in. Estab. by USGS.	1960-61	Horizontal & Vertical	12	GS
21.	Little America 78 09 - 78 10 S 162 16 - 162 14 W "Report of Little America Base 1962 Survey, Antarctica". (12 p.). Size 8 x 11 in. 2 points are photo-identified. Estab. by USGS.	Jan. 26-Feb. 6, 1962	Horizontal & Vertical	3 Horizontal & Vertical 6 Vertical	GS
22.	McMurdo Sound and adjacent area 76 01 - 78 52 S 159 21 - 167 12 E Printed list & diagram (3 p.), size 8 x 11 in. Photo-identified on aerial photos. Estab. by USGS.	1961-62	Horizontal & Vertical	1 Vertical, 46 Horizontal & Vertical	GS
23.	Queen Alexandra Range 82 01 - 85 24 S 157 24 - 127 09 E Printed list & diagram (3 p.), size 8 x 11 in. Photo-identified on aerial photos. Estab. by USGS.	1961-62	Horizontal & Vertical	60	GS

	AREA	DATE	TYPE	POINTS	HOLDING ORGANIZATION
24.	Queen Alexandra Range 82 57 - 84 49 S 156 - 164 07 E Photo-identified on aerial photos. Estab. by New Zealand. Dept. of Lands and Survey.	1961-62	Horizontal & Vertical	16	GS
25.	Queen Maud Range and Horlick Mountains 83 48 - 87 20 S 171 38 E - 106 35 W Printed list & diagram (3 p.), size 8 x 11 in. Photo-identified on aerial photos. Estab. by USGS.	1962-63	Horizontal & Vertical	65	GS
26.	Tucker Glacier area 71 57 - 72 29 S 164 40 - 166 57 E Typed list, size 8 x 11 in. Photo-identified on aerial photos. Estab. by Federated Mountain Club (New Zealand).	1962-63	Horizontal & Vertical	17	GS
27.	Victoria Land 72 37 - 73 40 S 160 11 - 165 28 E Photo-identified on aerial photos. Estab. by New Zealand. Dept. of Lands and Survey.	1962-63	Horizontal & Vertical	23	GS
28.	Victoria Land 71 58 - 75 58 S 158 22 - 170 39 E Printed list & diagram (3 p.), size 8 x 11 in. Photo-identified on aerial photos. Estab. by USGS.	1961-62	Horizontal & Vertical	47	GS

	AREA	DATE	TYPE	POINTS	HOLDING ORGANIZATION
29.	Victoria Land 69 24 - 73 22 S 156 22 - 171 06 E Printed list & diagram (3 p.), size 8 x 11 in. Photo-identified on aerial photos. Estab. by USGS.	1962-63	Horizontal & Vertical	69	GS
30.	Victoria Land 72 10 - 72 50 S 159 51 - 162 15 E Printed list, size 8 x 11 in. Photo-identified on aerial photos. Estab. by USGS.	1959-60	Horizontal & Vertical	18	GS
31.	Victoria Land, southern, and adjacent area 76 54 - 79 02 S 159 00 - 168 34 E Printed list (4 p.), size 8 x 11 in. Photo-identified on aerial photos. Estab. by USGS.	1960-61	Horizontal & Vertical	3 Vertical, 39 Horizontal and Vertical	GS
32.	Whitmore Mountains 82 34 - 82 41 S 105 49 - 104 28 W Ozalid of typed list, size 8 x 11 in. Estab. by USGS.	Feb. 14 1961	Horizontal & Vertical	10	GS

* * * * * * * * * * *

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33. American Geographical Society.
Antarctica, prepared...for the United States Antarctic Research Program under a grant from the National Science Foundation. 1963. 1:3,000,000. Stereographic projection. Printed in 4 sheets. 76 x 68 in. AGS

34. Arkticheskiy i Antarkticheskiy Nauchno-Issledovatel'skiy Institut.
Rel'yef Antarktiki (Relief of Antarctica). 1961. 1:12,000,000. AGS 070-A

35. Australia. Dept. of External Affairs. Antarctic Division.
MS "Nella Dan" - ANARE 1962-63, led by Phillip Law; 98 E. to 118 E. and 63 S. to 66 S. [1963] 1:1,000,000. Mercator projection. APO GS

Soundings in fathoms.

36. ----- MS "Nella Dan" - ANARE 1962-63, led by Phillip Law; 61 E. to 81 E. and 66 S. to 72 S. [1963] 1:1,000,000. Mercator projection. APO GS

Soundings in fathoms.

37. ----- MS "Thala Dan" - ANARE 1962-63, led by D. F. Styles; 102 E. to 122 E. and 63 S. to 66 S. [1963] 1:1,000,000. Mercator projection. APO GS

Soundings in fathoms.

38. ----- MS "Thala Dan" - ANARE 1962-63, led by D. F. Styles; 102 E. to 122 E. and 66 S. to 70 S. [1963] 1:1,000,000. Mercator projection. APO GS

Soundings in fathoms.

39. ----- MS "Thala Dan" - ANARE 1962-63, led by D. F. Styles; 122 E. to 142 E. and 63 S. to 66 S. [1963] 1:1,000,000. Mercator projection. APO GS

Soundings in fathoms.

40. ----- MS "Thala Dan" - ANARE 1962-63, led by D. F. Styles; 122 E. to 142 E. and 66 S. to 70 S. [1963] 1:1,000,000. Mercator projection. APO GS

Soundings in fathoms.

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41. Australia. Dept. of External Affairs. Antarctic Division. MS "Thala Dan" - ANARE 1962-63, 66 S. to 70 S. [1963] 1:1,000,000. Mercator projection. APO GS

Soundings in fathoms.

42. Australia. Division of National Mapping. Antarctica. 3d ed. Jul. 1961. 1:10,000,000. Polar stereographic projection. LC copy: monochrome, 27 x 27 in. GS copy: colored. 30 x 34 in. GS LC G9800 1961.A8

43. ----- Antarctica; Australian aerial photography programme from 1st Jan. 61 to 31st Dec. 62. [1961-62] 1:16,000,000. Colored. 14 x 13 in. In its Antarctica pictorial index of activities. 1st January 1961 - 31st December 1962. Canberra, [1963] Map [3]. LC

44. ----- Antarctica; Australian mapping activities from 1st Jan. 61 to 31st Dec. 62. Airborne radar altimeter flights [and] ground traverses incorporating barometric heights. [1961-62] 1:16,000,000. Colored. 14 x 13 in. In its Antarctica pictorial index of activities. 1st January 1961 - 31st December 1962. Canberra, [1963] Map [4]. LC

45. ----- Antarctica; Australian mapping programme as at 31st December 1962. Sheets compiled. 1962. 1:16,000,000. Colored. 14 x 13 in. In its Antarctica pictorial index of activities. 1st January 1961 - 31st December 1962. Canberra, [1963] Map [1]. LC

46. ----- Antarctica; Australian mapping programme from 1st Jan. 61 to 31st Dec. 62. Topographic surveys. [1961-62] 1:16,000,000. Colored. 14 x 13 in. In its Antarctica pictorial index of activities. 1st January 1961 - 31st December 1962. Canberra, [1963] Map [2]. LC

47. ----- Antarctica, sketch map of the coastal regions between longitudes 156 E. and 168 E. 1962. 1:500,000. Universal transverse Mercator. Ozalid. 44 x 36 in. GS INT/G

48. ----- Australian Antarctic territory. 1st ed. 1962. 1:250,000. Universal transverse Mercator. Colored. Series sheets.

Sheet no.	Coordinates	Holding Organization
SQ 38-39/14	67 00 - 68 00 S 45 00 - 48 00 E	GS INT/G
SQ 38-39/15	67 00 - 68 00 S 48 00 - 51 00 E	GS INT/G

ANTARCTICA

49. Australia. Division of National Mapping.
Australian Antarctic territory. Air photography and control index. 1962. 1:1,000,000. Series sheets. INT/G

Sheet no.	Coordinates
SQ 38-39	64 00 - 68 00 S 42 00 - 54 00 E
SQ 40-41	64 00 - 68 00 S 54 00 - 66 00 E
SQ 42-43	64 00 - 68 00 S 66 00 - 78 00 E
SQ 44-45	64 00 - 68 00 S 78 00 - 90 00 E
SQ 46-47	64 00 - 68 00 S 90 00 - 102 00 E
SQ 48-49	64 00 - 68 00 S 102 00 - 114 00 E
SQ 50-51	64 00 - 68 00 S 114 00 - 126 00 E
SQ 52-53	64 00 - 68 00 S 126 00 - 138 00 E
SQ 54-55	64 00 - 68 00 S 138 00 - 150 00 E
SR 38-39	68 00 - 72 00 S 42 00 - 54 00 E
SR 40-41	68 00 - 72 00 S 54 00 - 66 00 E
SR 42-43	68 00 - 72 00 S 66 00 - 78 00 E
SR 54-55	68 00 - 72 00 S 138 00 - 150 00 E
SR 56-57	68 00 - 72 00 S 150 00 - 162 00 E
SR 58-59	68 00 - 72 00 S 162 00 - 174 00 E

50. ----- Australian Antarctic territory. Base compilation 1:1,000,000. Lambert conformal conic projection. Ozalid. 25 x 22 in. Series sheets.

Sheet no.	Date	Holding Organization	Date	Holding Organization
SQ 38-39	1962	LC GS		
SQ 40-41	1962	LC GS		
SQ 42-43	1962	LC GS		
SQ 44-45	1962	LC GS APO		

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50. Australia. Division of National Mapping.
Australian Antarctic Territory. Base compilation 1:1,000,000. Lambert conformal conic projection. Ozalid. 25 x 22 in. Series sheets. (Continued)

Sheet no.	Date	Holding Organization	Date	Holding Organization
SQ 46-47	1962	LC GS APO		
SQ 48-49	1962	LC GS APO		
SQ 50-51	1962	LC GS APO		
SQ 52-53	1962	LC GS APO		
SQ 54-55	1962	LC GS APO		
SR 38-39	1962	LC GS		
SR 40-41	1962	LC GS	10-63	LC
SR 42-43	1962	LC GS	8-63	LC
SR 44-45	1962	LC GS		
SR 48-49	1962	GS		
SR 54-55	1962	LC GS APO		
SR 56-57	1962	LC GS APO		
SR 58-59	1962	APO		
SS 41-43	1962	LC GS		

51. ----- [Australian Antarctic territory] 1:100,000. Transverse Mercator projection. Ozalid. Series sheets.

Sheet no.	Date	Coordinates	Holding Organization
SQ 38-39/8C	1962	65 30 - 66 00 S 51 00 - 52 30 E	GS INT/G
D	1962	65 30 - 66 00 S 52 30 - 54 00 E	GS INT/G
SQ 38-39/11B	1960	66 00 - 66 30 S 49 30 - 51 00 E	GS INT/G
C	1960	66 30 - 67 00 S 48 00 - 49 30 E	GS INT/G
D	1960	66 30 - 67 00 S 49 30 - 51 00 E	GS INT/G
SQ 38-39/12A	1962	66 00 - 66 30 S 51 00 - 52 30 E	GS INT/G
B	1962	66 00 - 66 30 S 52 30 - 54 00 E	GS INT/G
C	1962	66 30 - 67 00 S 51 00 - 52 30 E	GS INT/G
D	1962	66 30 - 67 00 S 52 30 - 54 00 E	GS INT/G
SQ 38-39/13D	1961	67 30 - 68 00 S 43 30 - 45 00 E	GS INT/G

51. Australia. Division of National Mapping.
[Australian Antarctic territory] 1:100,000. Transverse Mercator projection. Ozalid. Series sheets. (Continued)

Sheet no.	Date	Coordinates	Holding Organization
SQ 38-39/14A	1961	67 00 - 67 30 S 45 00 - 46 30 E	GS INT/G LC
B	1961	67 00 - 67 30 S 46 30 - 48 00 E	GS INT/G LC
C	1961	67 30 - 68 00 S 45 00 - 46 30 E	GS INT/G LC
D	1961	67 30 - 68 00 S 46 30 - 48 00 E	GS INT/G LC
SQ 38-39/15A	1960	67 00 - 67 30 S 48 00 - 49 30 E	GS INT/G LC
B	1960	67 00 - 67 30 S 49 30 - 51 00 E	GS INT/G LC
C	1960	67 30 - 68 00 S 48 00 - 49 30 E	GS INT/G LC
D	1960	67 30 - 68 00 S 49 30 - 51 00 E	GS INT/G LC
SQ 38-39/16A	1962	67 00 - 67 30 S 51 00 - 52 30 E	GS INT/G LC
B	1962	67 00 - 67 30 S 52 30 - 54 00 E	GS INT/G LC
C	1962	67 30 - 68 00 S 51 00 - 52 30 E	GS INT/G LC
D	1962	67 30 - 68 00 S 52 30 - 54 00 E	GS INT/G LC
SQ 40-41/5C	1962	65 30 - 66 00 S 54 00 - 55 30 E	GS INT/G LC
SQ 40-41/9A	1962	66 00 - 66 30 S 54 00 - 55 30 E	GS INT/G LC
B	1962	66 00 - 66 30 S 55 30 - 57 00 E	GS INT/G LC
C	1962	66 30 - 67 00 S 54 00 - 55 30 E	GS INT/G LC
D	1962	66 30 - 67 00 S 55 30 - 57 00 E	GS INT/G LC
SQ 40-41/10C	1962	66 30 - 67 00 S 57 00 - 58 30 E	GS INT/G LC
SQ 40-41/13A	1962	67 00 - 67 30 S 54 00 - 55 30 E	GS INT/G LC
B	1962	67 00 - 67 30 S 55 30 - 57 00 E	GS INT/G LC

ANTARCTICA

51. Australia. Division of National Mapping.
[Australian Antarctic territory] 1:100,000. Transverse Mercator projection. Ozalid. Series sheets. (Continued)

Sheet no.	Date	Coordinates	Holding Organization
SQ 40-41/13C	1962	67 30 - 68 00 S 54 00 - 55 30 E	GS INT/G LC
D	1962	67 30 - 68 00 S 55 30 - 57 00 E	GS INT/G LC
SQ 40-41/14A	1962	67 00 - 67 30 S 57 00 - 58 30 E	GS INT/G
B	1962	67 00 - 67 30 S 58 30 - 60 00 E	GS INT/G
C	1962	67 30 - 68 00 S 57 00 - 58 30 E	GS INT/G
D	1962	67 30 - 68 00 S 58 30 - 60 00 E	GS INT/G
SQ 40-41/15A	1963	67 00 - 67 30 S 60 00 - 61 30 E	GS INT/G
B	1963	67 00 - 67 30 S 61 30 - 63 00 E	GS INT/G
C	1963	67 30 - 68 00 S 60 00 - 61 30 E	GS INT/G
D	1963	67 30 - 68 00 S 61 30 - 63 00 E	GS INT/G
SQ 40-41/16A	1963	67 00 - 67 30 S 63 00 - 64 30 E	GS INT/G
C	1963	67 30 - 68 00 S 63 00 - 64 30 E	GS INT/G
D	1963	67 30 - 68 00 S 64 30 - 66 00 E	GS INT/G
SR 38-39/1A	1962	68 00 - 68 30 S 42 00 - 43 30 E	GS INT/G LC
B	1962	68 00 - 68 30 S 43 30 - 45 00 E	GS INT/G
SR 38-39/2B	1962	68 00 - 68 30 S 46 30 - 48 00 E	GS INT/G LC
SR 38-39/3A	1960	68 00 - 68 30 S 48 00 - 49 30 E	GS INT/G LC
SR 38-39/3B	1960	68 00 - 68 30 S 49 30 - 51 00 E	GS INT/G LC
SR 38-39/4B	1962	68 00 - 68 30 S 52 30 - 54 00 E	GS INT/G
C	1962	68 30 - 69 00 S 51 00 - 52 30 E	GS INT/G

ANTARCTICA

51. Australia. Division of National Mapping.
[Australian Antarctic territory] 1:100,000. Transverse Mercator projection. Ozalid. Series sheets. (Continued)

Sheet no.	Date	Coordinates	Holding Organization
SR 40-41/1A	1962	68 00 - 68 30 S 54 00 - 55 30 E	GS INT/G LC
B	1962	68 00 - 68 30 S 55 30 - 57 00 E	GS INT/G LC
SR 40-41/2A	1963	68 00 - 68 30 S 57 00 - 58 30 E	GS INT/G
B	1963	68 00 - 68 30 S 58 30 - 60 00 E	GS INT/G
SR 40-41/3B	1963	68 00 - 68 30 S 61 30 - 63 00 E	GS INT/G
D	1963	68 30 - 69 00 S 61 30 - 63 00 E	GS INT/G
SR 40-41/4A	1963	68 00 - 68 30 S 63 00 - 64 30 E	GS INT/G
B	1963	68 00 - 68 30 S 64 30 - 66 00 E	GS INT/G
C	1963	68 30 - 69 00 S 63 00 - 64 30 E	GS INT/G
D	1963	68 30 - 69 00 S 64 30 - 66 00 E	GS INT/G
SR 40-41/8A	1961	69 00 - 69 30 S 63 00 - 64 30 E	GS INT/G
B	1961	69 00 - 69 30 S 64 30 - 66 00 E	GS INT/G
C	1961	69 30 - 70 00 S 63 00 - 64 30 E	GS INT/G
D	1961	69 30 - 70 00 S 64 30 - 66 00 E	GS INT/G

52. Bentley, Charles R.
Map of subglacial rock surface topography. 1962. Stereographic. In his "Glacial and subglacial geography of Antarctica," Antarctic research, Geophysical monograph no. 7, 1962. p. 15. GPRC

53. Chile. Armada. Departamento de Navegación e Hidrografía.
Sector Antártico Chileno. Chart E. [1956] 1:5,000,000. Colored. 35 x 32 in. DCL

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54. Comité National Français des Recherches Antarctiques, Paris.
Carte géologique de l'Antarctique. Jul. 1961. 1:10,000,000. Polar stereographic projection. Colored. 33 x 27 in.
AMS APO DCL LC G9801.C5 1961.C3 NSF

Prepared by André Cailleux. Printed by France. Institut Géographique National.

55. Egleson, James.
Antarctic current flow. 1962. 1:52,000,000. Colored. 11 x 10 in. In Kort, V. G. "The Antarctic Ocean," Scientific American, v. 207, Sept. 1962. p. 114-115. LC

"Computed from data collected during the International Geophysical Year by the Soviet Marine Antarctic Expedition."

56. ----- Heat distribution in the Southern Ocean in summer (October through March). 1962. 1:118,000,000. Colored. 5 x 5 in. In Kort, V. G. "The Antarctic Ocean," Scientific American, v. 207, Sept. 1962. p. 120. LC

57. ----- Water transport summary, in millions of cubic meters. 1962. 1:77,000,000. Colored. 7 x 7 in. In Kort, V. G. "The Antarctic Ocean," Scientific American, v. 207, Sept. 1962. p. 116. LC

"Shows how the circumpolar current varies in volume as it passes between Antarctica and other land masses."

58. Geis, Irving.
Annual accumulation of precipitation. 1962. 1:69,000,000. Colored. 5 x 5 in. In Rubin, Morton J. "The Antarctic and the weather," Scientific American, v. 207, Sept. 1962. p. 89. LC

59. ----- Early spring circulation. Oct. 1958. 1:74,000,000. Colored. 4 x 5 in. In Rubin, Morton J. "The Antarctic and the weather," Scientific American, v. 207, Sept. 1962. p. 92. LC

Chart prepared by Ropar and Gray.

60. ----- Early summer circulation. Nov. 1957. 1:74,000,000. Colored. 4 x 5 in. In Rubin, Morton J. "The Antarctic and the weather." Scientific American, v. 207, Sept. 1962. p. 92. LC

Chart prepared by Ropar and Gray.

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61. Geis, Irving.
Mean temperature. 1962. 1:69,000,000. Colored. 5 x 5 in. In Rubin, Morton J. "The Antarctic and the weather," Scientific American, v. 207, Sept. 1962. p. 88-89. LC

62. ----- Midwinter circulation in the Antarctic stratosphere. Jul. 1958. 1:74,000,000. Colored. 4 x 5 in. In Rubin, Morton J. "The Antarctic and the weather," Scientific American, v. 207, Sept. 1962. p. 92. LC

"The chart is for July 14-16, 1958, and shows the altitude, in meters, of the 50-millibar constant-pressure level." Prepared by Ropar and Gray.

63. ----- Winter circulation in mid-troposphere (about five kilometers above the surface). Aug. 1958. 1:74,000,000. Colored. 4 x 5 in. In Rubin, Morton J. "The Antarctic and the weather," Scientific American, v. 207, Sept. 1962. p. 92. LC

"This is an average plot of the 500-millibar surface for August, 1958, made by Alt, Astapenko and Ropar."

64. ----- Winter storm tracks. Aug. 1958. 1:69,000,000. Colored. 5 x 5 in. In Rubin, Morton J. "The Antarctic and the weather," Scientific American, v. 207, Sept. 1962. p. 88. LC

"The storm tracks were charted for August, 1958, at IGY Weather Central..."

65. Goor, G. B. van, Zonen's Uitgeversmaatschappij N.V., 's-Gravenhage. Antarctica [and] Australië. [1962] 1:15,000,000. Colored. 2 maps on sheet 30 x 44 in. Wall map in Dutch. LC

66. Gt. Brit. Directorate of Overseas Surveys.
Antarctica 1st ed. 1963. 1:15,000,000. Polar stereographic projection. (D.O.S. misc. 135). AGS LC GS

67. ----- Trans-Antarctic Expedition. Traverse of main crossing journey 1957-58. (Drawn and reproduced from compilations by surveyors of the Commonwealth Trans-Antarctic Expedition 1957-58.) 1963. 1:2,000,000. Colored. 24 x 34 in. (D.O.S. 812). GS LC

68. Gt. Brit. Hydrographic Office.
The Antarctic - Approaches to Marie Byrd Land. [59 30 - 75 S., 89 30 - 153 W.] [Chart 3174.] Dec. 1960. 1:2,750,000. Mercator projection. Uncolored. 39 x 27 in.
LC G3201s.P5 var .G7

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69. Gt. Brit. Hydrographic Office.
Antarctica - Dronning Maud Land to Wilhelm II Land. [52 20 - 71 20 S., 27 - 90 30 E.] [Chart 3171.] Sept. 1961. 1:2,750,000. Mercator projection. Uncolored. 39 x 27 in.

70. Jarrold and Sons.
Discovery map of the Antarctic. [196-] 1:12,000,000. Monochrome. 19 x 18 in. DCL

71. Kosack, Hans-Peter.
Die Kartenwerke der Sowjetischen Komplexen Antarktischen Expedition, 1956-59. 1961. 1:15,500,000. Uncolored. 10 x 8 in. In Petermanns geographische Mitteilungen, 105. Jahrgang, 1961, Heft 4, Tafel 35. LC

Graphic index to sheets published by Soviet Union at scales of 1:50,000, 1:100,000 and 1:1,000,000.

72. Lambert, B. P.
The cartographic activities of SCAR. Topographic maps published after 1959 [and] topographic maps being prepared during 1962. Jan. 1963. 1:30,000,000. Colored. 10 x 9 in. In his "The cartographic activities of SCAR," Polar Record, v. 11, January 1963. between p. 510-511. LC

73. ----- The cartographic activities of SCAR. Topographic maps published before 1959. Jan. 1963. 1:30,000,000. Colored. 10 x 9 in. In his "The cartographic activities of SCAR," Polar Record, v. 11, January 1963. opp. p. 510. LC

74. List, Paul, Verlag, München.
Südpolargebiet. Wenschow-Reliefkarte. [1962?] 1:10,000,000. Colored. 36 x 50 in. Wall map. LC

75. National Geographic Society, Washington, D. C.
Antarctica. 1963. 1:9,820,800. Azimuthal equidistant projection. 25 x 19 in. AGS

76. ----- Antarctica as it would appear ice-free. In its National Geographic magazine, v. 123, Feb. 1963. p. 277. AGS

77. Rubin, Morton J. and Mario B. Giovinetto.
Map of west Antarctica showing topographic features, contours and station locations. Dec. 1962. 1:15,000,000. Stereographic projection. In their "Snow accumulation in central west Antarctica as related to atmospheric and topographic factors," Journal of geophysical research, v. 67, no. 13. p. 5164. GPRC

78. Rubin, Morton J. and Mario B. Giovinetto.
Tracks of sea-level and 700-mb depressions in 1958, west Antarctica. (After Alt, Astapenko and Ropar). Dec. 1962. 1:18,000,000. Stereographic projection. In their "Snow accumulation in central west Antarctica as related to atmospheric and topographic factors," Journal of geophysical research, v. 67, no. 13. p. 5166. GPRC

79. Tagawa, Bunji.
Antarctic land mass. 1962. 1:30,500,000. Colored. 7 x 9 in. In Woollard, G. P. "The land of the Antarctic," Scientific American, v. 207, Sept. 1962. p. 152. LC

Indicates contour lines (1000 meter intervals) and locations where seismic refraction and seismic reflection measurements have been made.

80. ----- Contour map of the Antarctic. 1962. 1:29,000,000. Colored. 12 x 12 in. In Crary, A. P. "The Antarctic," Scientific American, v. 207, Sept. 1962. p. 62-63. LC

"Shows the relief of the continental ice and land beneath it and the depth of the surrounding waters."

81. ----- Depth of base of Antarctic land mass in kilometers below sea level. 1962. 1:30,500,000. Colored. 7 x 9 in. In Woollard, G. P. "The land of the Antarctic," Scientific American, v. 207, Sept. 1962. p. 153. LC

82. ----- Distribution of plant life in Antarctica. 1962. 1:34,000,000. Colored. 11 x 9 in. In Llano, George A. "The terrestrial life of the Antarctic," Scientific American, v. 207, Sept. 1962. p. 216-217. LC

83. ----- Geological map of Antarctica. 1962. 1:34,000,000. Colored. 11 x 9 in. In Doumani, George A. and William E. Long, "The ancient life of the Antarctic," Scientific American, v. 207, Sept. 1962. p. 172-173. LC

84. ----- Habitats of the most important marine animals of the Antarctic continent and its surrounding waters. 1962. 1:48,500,000. Colored. 11 x 8 in. In Murphy, Robert Cushman, "The oceanic life of the Antarctic," Scientific American, v. 207, Sept. 1962, p. 192-193. LC

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85. Thiel, Patricia L.
Ice thickness. Contour interval=500 meters. 1962. Stereographic projection. In Thiel, E. C. "The amount of ice on planet Earth," Antarctic research, Geophysical monograph no. 7, 1962. GPRC

Reproduced from large colored maps exhibited at the Matthew Fontaine Maury Memorial Antarctic Symposium, Tenth Pacific Science Congress, Honolulu, Hawaii. Aug. 21-Sept. 2, 1961.

86. ----- Rock topography (without allowance for isostatic rebound). Contour interval: 500 meters for continent; 1000 meters for ocean. 1962. In Thiel, E. C. "The amount of ice on planet Earth," Antarctic research, Geophysical monograph no. 7, 1962. GPRC

Reproduced from large colored maps exhibited at the Matthew Fontaine Maury Memorial Antarctic Symposium, Tenth Pacific Science Congress, Honolulu, Hawaii. Aug. 21-Sept. 2, 1961.

87. ----- Snow surface topography; contour interval=500 meters. 1962. Stereographic projection. 1962. In Thiel, E. C. "The amount of ice on planet Earth," Antarctic research, Geophysical monograph no. 7, 1962. GPRC

Reproduced from large colored maps exhibited at the Matthew Fontaine Maury Memorial Antarctic Symposium, Tenth Pacific Science Congress, Honolulu, Hawaii. Aug. 21-Sept. 2, 1961.

88. U.S.S.R. Ministerstvo Morskogo Flota.
Karta Antarktidy. 1961. 1:3,000,000. Polar stereographic projection. Colored. 9 sheets, each approx. 33 x 30 in. GS LC

89. ----- Rel'yef Antarktiki. 1961. 1:12,000,000. GS

90. U. S. Aeronautical Chart and Information Center.
U.S.A.F. Aerospace planning chart. [No. ASC6] 1962. 1:9,000,000. Polar stereographic. Colored. 57 x 41 in. ACIC

91. U. S. Aeronautical Chart and Information Center.
U. S. Air Force global navigation and planning chart. 1:5,000,000. Lambert conformal conic projection. Colored lithograph. 41 x 57 in. Series sheets. ACIC

Chart No.	Edition	Base No.	Base Date	Revision Date	Air Information Date
GNC 21	2d	200	3-64		3-64
GNC 22	2d	200	12-63		3-64
GNC 23	3d	300	4-64		3-64
GNC 24	2d	200	3-64		3-64
GNC 25	4th	310	6-63	10-63	11-63

92. ----- World aeronautical chart. 1:1,000,000. Lambert conformal conic, *Polar stereographic projection. Series sheets. ACIC

Chart No.	Edition	Base No.	Base Date	Revision Date	Air Information Date
1772	1st	200	10-46	7-63	9-63
1793	1st	200	5-62		6-62
*1821	1st	130	8-47	12-62	2-63

93. U.S. Geological Survey
Antarctica 1:250,000 reconnaissance series. 1:250,000. Lambert conformal conic projection. Colored. 33 x 26 in. Series sheets. Topographic. GS

Sheet name	Date
Havola Escarpment	1963 (Compiled 1961 from 1960 photography)
Long Hills	1963 (Compiled 1961 from 1960 photography)
Moulton Escarpment	1963 (Compiled 1961 from 1960 photography)
Ohio Range	1963 (Compiled 1961 from 1959 photography)
Pagano Nunatak	1963 (Compiled 1961 from 1959 photography)
Stewart Hills	1963 (Compiled 1961 from 1959 photography)
Thiel Mountains	1963 (Compiled 1961 from 1959 photography)

94. ----- Antarctica with subglacial and ocean bottom features. 1961. 1:10,000,000. Azimuthal equal area projection. 39 x 50 in. GS

3 maps; Plastic, transparent-surface; paper, semi-transparent-surface; paper, semi-transparent-subglacial and ocean bottom.

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95. U.S. Naval Oceanographic Office
Antarctica, U.S. Navy operation "Deep Freeze '63" (1963-64). Chart 2562-D. 5th ed. Aug. 1963. 1:11,250,000. Azimuthal equidistant projection. Colored. 47 x 30 in. NAVOCEANO

96. --- Antarctica area stations, U.S. Navy operation "Deep Freeze '64" (1963-64). Chart 16429-A. 11th ed. Sept. 1963. 1:19,279,413. Azimuthal equidistant projection. Colored. 11 x 15 in. NAVOCEANO

97. --- Air navigation chart Antarctica. Jul.-Sept. 1963. 1:2,188,000. Polar stereographic projection. Colored 49 x 34 in. Series sheets NAVOCEANO

Chart no.	Chart name	Ed.	Coordinates
V30-SP5	Marie Byrd Land	9th	66 S - 88 W 57 S - 135 W
			82 S - 83 W 65 S - 163 W
V30-SP6	Palmer Peninsula -	9th	57 S - 45 W 65 S - 17 W
	Edith Ronne Land		66 S - 92 W 82 S - 97 W
V30-SP7	Scott Island -	9th	81 S - 84 W 81 S - 84 E
	McMurdo Sound -		65 S -161 W 65 S - 161 E
	South Pole		
V30-SP8	New Schwabenland -	9th	65 S - 19 W 65 S - 19 E
	South Pole		82 S - 96 W 82 S - 96 E
V30-SP9	Wilkes Land	7th	83 E - 83 S 88 E - 66 S
			65 S -164 E 135E - 57 S
V30-SP10	Wilhelm II Coast -	8th	17 E - 65 S 45 E - 56 S
	Princess Ragnhild		98 E - 83 S 93 E - 66 S
	Coast		
V30-SP11	McMurdo Sound -	6th	73 S - 50 W 79 S - 20 E
	Weddell Sea		72 S -137 W 76 S - 166 E

98. --- Antarctic strip chart. Aug. 1963. 1:2,188,800. Transverse Mercator projection. Colored. Series sheets. NAVOCEANO

*Printed on verso of preceding number.

Chart no.	Chart name	Ed.
16384-3	Christchurch, New Zealand to Scott Island	8th
*16384-4	Scott Island to McMurdo Sound	8th
16384-5	Ushuaia Airfield, South America to Berkner Island, Antarctica	6th

98. U.S. Naval Oceanographic Office - (Cont.)

Chart no.	Chart name	Ed.
16384-6	McMurdo Sound to Robert Scott Glacier (1:1,000,000, Polar stereographic projection)	5th
*16384-7	Shackleton Inlet to South Pole (1:1,000,000, Polar stereographic projection)	5th
16384-10	McMurdo Sound to Little America V (1:1,000,000, Polar stereographic projection)	6th
*16384-11	Little America V to Byrd Station (1:1,000,000, Polar stereographic projection)	6th

99. --- Antarctica. Oct. 1962. (*Nov. 1963). 1:1,5000,000. Mercator projection. Black and white. 32 x 51 in. Series sheets. NAVOCEANO

Chart no.	Chart name	Ed.	Coordinates
6637	Marie Byrd Land: Cape Colbeck to Cape Herlacher	4th	69 15 - 78 00 S 111 00 -161 00 W
6638	Cape Herlacher to Matha Strait	4th	66 00 - 76 00 S 66 00 -115 00 W
*6639	Palmer Peninsula	3rd	54 35 - 75 05 S 44 00 - 76 00 W
6640	Weddell Sea	3rd	69 45 - 78 15 S 12 00 - 62 00 W

100. Woollard, George P.
Antarctic land mass. Sept. 1962. Stereographic projection. In "The land of the Antarctic," Scientific American, Sept. 1962. p. 152. GPRC

101. -- Depth of base of Antarctic land mass. Sept. 1962. Stereographic projection. In "The land of the Antarctic," Scientific American, Sept. 1962. p. 153. GPRC

102. -- Inferred depth of base of crust beneath Antarctica on the basis of normal empirical relation and equivalent elevation. 1962. Stereographic projection. In his "Crustal structure in Antarctica," reprinted from Antarctic research, Geophysical monograph no. 7., Aug. 1962. p. 71. GPRC

ANTARCTIC PENINSULA AND SURROUNDING AREAS

103. Argentina. Servicio de Hidrografía Naval. Archipiélago de Palmer y Estrechos de Bismarck y de Gerlache. [64 00 - 65 12 S. 60 40 - 65 00 W.] [Chart 129.] 1961. 1:200,000. Mercator projection. Photo. 35 x 42 in. APO GS

104. -- Canal Grandidier y Estrechos de Bismarck y Pendleton. [64 50 - 66 12 S. 63 30 - 67 50 W.] [Chart 130.] 1960. 1:200,000. Mercator projection. Photo. 35 x 42 in. GS

105. -- Islas Shetland del Sur, Isla 25 de Mayo, Bahía Guardia Nacional. [62 09 - 62 20 S. 58 33 - 59 04 W.] [Chart 137.] 1960. 1:25,000. Mercator projection. Photo. 35 x 45 in. APO GS

106. -- Islas Shetland del Sur, Isla 25 de Mayo, Bahía Lasserre. [62 03 - 62 16 S. 58 10 - 58 40 W.] [Chart 136.] 1959. 1:30,000. Mercator projection. Photo. 35 x 40 in. APO GS

107. -- De Islas Torre y Baja a Archipiélago Melchior. [63 13 - 64 24 S. 59 30 - 63 45 W.] [Chart 128.] 1st ed. 1960. 1:200,000. Mercator projection. 35 x 45 in. APO GS

108. -- Estrecho Antarctic. [62 46 - 64 30 S. 54 10 - 60 00 W.] [Chart 124.] 1960. 1:1,250,000. Mercator projection. Photo. 35 x 45 in. APO GS

109. Chile. Armada. Departamento de Navegación e Hidrografía. Bahía Almirantazgo, Isla Rey Jorge. [62 01 - 62 18 S. 58 14 - 58 40 W.] [Chart 1403.] 1961. 1:40,000. Photo. 25 x 33 in. APO GS

110. -- Bahía Chile. Territorio Antártico Chileno. [62 26 48 - 62 31 S. 59 36 10 - 59 40 W.] [Chart 1401.] 1951. 1:20,000. Photo. 18 x 34 in. APO GS

111. -- Bahía Paraíso. [64 36 - 64 56 S. 62 43 - 63 13 W.] [Chart 1503, variously numbered 1505.] 1959. 1:50,000. Photo. 40 x 33 in. APO GS

112. -- Chile - Canal Grandidier - Territorio Antártico Chileno. [Chart 1502.] 1962. 1:200,000. Mercator projection. Colored. 44 x 32 in. APO LC

ANTARCTIC PENINSULA AND SURROUNDING AREAS

113. Chile. Armada. Departamento de Navegación e Hidrografía. Chile - Isla Elefante - Isla Trinidad - Territorio Antártico Chileno. [60 45 - 64 10 S. 53 45 - 62 50 W.] [Chart 1400.] 1961. 1:500,000. Mercator projection. Colored. 39 x 32 in. APO GS LC

114. -- Estrecho de Gerlache. [63 35 - 65 05 S. 60 05 - 64 45 W.] [Chart 1501.] 1962. 1:200,000. Mercator projection. Photo. 46 x 34 in. GS

115. -- Isla Decepción, Territorio Antártico Chileno. [62 47 - 63 08 S. 60 23 - 61 02 W.] [Chart 1402.] 1953. 1:50,000. Photo. 34 x 30 in. GS

116. -- Sector Antártico Chileno. [51 90 S. - 72 30 - 90 S. 35 00 - 0 - 0 - 145 W.] [Chart 61.] 1956. 1:5,000,000. Azimuthal equidistant projection. Photo. 33 x 37 in. GS

117. -- Sector Antártico Chileno, desde el meridiano 53 el 90 W. 1959. 1:5,000,000. Azimuthal equidistant projection. APO

118. -- Recalada a Puerto Covadonga por Islote Montravel y por Isla Astrolabio. [62 45 - 63 35 S. 57 45 - 59 00 W.] [Chart 1404.] 1959. 1:150,000. Photo. 38 x 22 in. APO GS

119. -- Tierra del Fuego, Islas Shetland. [55 00 - 63 00 S. 53 00 - 71 00 W.] [Chart 55.] 1956. 1:1,500,000. Photo. 30 x 26 in. GS

120. Gt. Brit. Directorate of Overseas Surveys. British Antarctic territory. 1st ed. 1963. 1:500,000. Lambert conical orthomorphic projection. Colored. 27 x 26 in. Series sheets. (D.O.S. 710. D401).

Sheet no.	Holding Organization
14	AGS LC

121. -- ----- 1963. 1:200,000. Lambert conical orthomorphic projection. Colored. Series sheets. (D.O.S. 610. D 501).

Sheet no.	Edition	Coordinates	Holding Organization
W 68-62	2	68 00 69 00 S 62 00 64 00 W	GS LC

121. Gt. Brit. Directorate of Overseas Surveys - (Cont.)
British Antarctic territory. 1963. 1:200,000. Lambert conical orthomorphic projection. Colored. Series sheets. (D.O.S. 610. D 501).

Sheet no.	Edition	Coordinates	Holding Organization	
W 68-64	2	68 00 69 00 S 64 00 66 00 W	GS	LC
W 68-66	2	68 00 69 00 S 66 00 68 00 W	GS	LC
W 69-62	2	69 00 70 00 S 62 00 64 00 W	GS	LC
W 69-64	2	69 00 70 00 S 64 00 66 00 W	GS	LC
W 69-66	2	69 00 70 00 S 66 00 68 00 W	GS	LC
W 69-68	1	69 00 70 00 S 68 00 70 00 W	GS	LC
W 77 32/34	1	77 00 78 00 S 32 00 36 00 W	APO INT/G	GS LC
W 77 36/38	1	77 00 78 00 S 36 00 40 00 W	APO INT/G	GS LC
W 78 32/34	1	78 00 79 00 S 32 00 36 00 W	APO INT/G	GS LC
W 78 36/38	1	78 00 79 00 S 36 00 40 00 W	APO INT/G	GS LC
W 79 24/26 & part W 78 24/26	1	78 50 80 00 S 24 00 28 00 W	APO INT/G	GS LC
W 79 28/30 & part W 78 28/30	1	79 00 80 00 S 28 00 32 00 W	APO INT/G	GS LC
W 79 32/34	1	79 00 80 00 S 32 00 36 00 W	APO INT/G	GS LC
W 80 20/22	1	80 00 81 00 S 20 00 24 00 W	APO INT/G	GS LC
W 80 24/26	1	80 00 81 00 S 24 00 28 00 W	APO INT/G	GS LC
W 80 28/30	1	80 00 81 00 S 28 00 32 00 W	APO INT/G	GS LC
W 81 24/26	1	81 00 82 00 S 24 00 28 00 W	GS	LC
W 81 28/30	1	81 00 82 00 S 28 00 32 00 W	GS	LC

ANTARCTIC PENINSULA AND SURROUNDING AREAS

122. Gt. Brit. Directorate of Overseas Surveys
British Antarctic territory. 1:200,000.

A provisional issue for positioning place names. Earlier issues entitled: Falkland Islands Dependencies.

Sheet no.	Date R.D.F.O.	Coordinates	Holding Organization
W 62 56	1964	62 00 63 00 S 56 00 58 00 W	APO INT/G
W 62 62	1964	62 00 63 00 S 62 00 64 00 W	APO GS (1962) INT/G
W 63 54	1964	63 00 64 00 S 54 00 56 00 W	APO INT/G
W 63 56	1964	63 00 64 00 S 56 00 58 00 W	APO INT/G
W 63 58	1964	63 00 64 00 S 58 00 60 00 W	APO GS (1962) INT/G
W 63 62	1962	63 00 64 00 S 62 00 64 00 W	GS
W 64 56	1964	64 00 65 00 S 56 00 58 00 W	APO INT/G
W 64 58	1964	64 00 65 00 S 58 00 60 00 W	APO INT/G
W 64 60	1964	64 00 65 00 S 60 00 62 00 W	APO INT/G
W 65 60	1964	65 00 66 00 S 60 00 62 00 W	APO INT/G
W 65 62	1964	65 00 66 00 S 62 00 64 00 W	APO INT/G
W 67 66	1964	67 00 68 00 S 66 00 68 00 W	APO GS (1962) INT/G
W 67 68	1964	67 00 68 00 S 68 00 70 00 W	APO GS (1962) INT/G
W 68 62	1964	68 00 69 00 S 62 00 64 00 W	APO GS (1962) INT/G
W 68 64	1962	68 00 69 00 S 64 00 66 00 W	GS INT/G
W 68 66	1964	68 00 69 00 S 66 00 68 00 W	APO GS (1962) INT/G
W 68 70	1963	68 00 69 00 S 70 00 72 00 W	INT/G
W 68 72	1963	68 00 69 00 S 72 00 74 00 W	INT/G
W 69 62	1962	69 00 70 00 S 62 00 64 00 W	GS INT/G

ANTARCTIC PENINSULA AND SURROUNDING AREAS

122. Gt. Brit. Directorate of Overseas Surveys. - (Cont.)
British Antarctic territory. 1:200,000.

A provisional issue for positioning place names. Earlier issues entitled: Falkland Islands Dependencies.

Sheet no.	Date R.D.F.O.	Coordinates	Holding Organization	
W 69 64	1962	69 00 70 00 S 64 00 66 00 W	GS	INT/G
W 69 66	1962	69 00 70 00 S 66 00 68 00 W	GS	INT/G
W 69 68	1961	69 00 70 00 S 68 00 70 00 W	GS	
W 69 72	1963	69 00 70 00 S 72 00 74 00 W	INT/G	
W 71 62	1964	71 00 72 00 S 62 00 64 00 W	APO	INT/G
W 71-66	1959	71 00 72 00 S 66 00 68 00 W	GS	
W 72-66	1959	72 00 73 00 S 66 00 68 00 W	GS	
W 73-60	1958	73 00 74 00 S 60 00 62 00 W	GS	
W 73-62	1957	73 00 74 00 S 62 00 64 00 W	GS	
W 73-70	1960	73 00 74 00 S 70 00 72 00 W	GS	
W 73-72	1960	73 00 74 00 S 72 00 74 00 W	GS	
W 74-60	1958	74 00 75 00 S 60 00 62 00 W	GS	
W 74-62	1958	74 00 75 05 S 62 00 74 00 W	GS	
W 78 34 and W 78 32	1961	78 00 79 00 S 32 00 36 00 W	INT/G	
W 79 30 and W 79 28	1962	79 00 80 00 S 28 00 32 00 W	INT/G	

Miscellaneous

Sheet no.	Date	Scale	Coordinates	Holding Organization
2 Misc. 65	1962	1:100,000	62 10 62 43 S 58 45 60 05 W	GS

122. Gt. Brit. Directorate of Overseas Surveys. - (Cont.)
British Antarctic territory. 1:200,000.

A provisional issue for positioning place names. Earlier issues entitled: Falkland Islands Dependencies.

Miscellaneous - (Cont.)

Sheet no.	Date	Scale	Coordinates	Holding Organization
3 Misc. 66	1962	1:100,000	62 21 62 53 S 60 61 33 W	GS
Misc. 19	1964	1:20,000		APO
Misc. 30	1964	1:12,500		APO
Misc. 71	1964	1:100,000		APO
Misc. 72	1962	1:3,550,000		APO GS
Misc. 73	1964	1:56,500		APO

123. -- British Antarctic territory. Various scales. INT/G

A provisional issue for positioning place names.

Sheet no.	Area	Edition	Date
17	Argentine Islands	6	1962
23	Stonington Island Area	5	1964
31	South Georgia	4	1960
33	South Orkney Islands	4	1960
34	South Orkney Islands	4	1960
36	South Sandwich Islands	3	1960
40	The Names of Coasts in the British Antarctic Territory with the features marking their limits	6	1963
46	Wiencke Island & Anvers Island	6	1960
51	Bismarck Strait Area	4	1960
54	Graham Coast (Sheet 1)	3	1960
56	Graham Coast (Sheet 3)	3	1960
59	A (French Passage) & B (Mutton Cove Area)	4	1962
60	Danco Coast (Sheet 1)	2	1960
61	Danco Coast (Sheet 2)	3	1960
63	Groups of Associated Ideas in Place-Names	4	1963
64	King George Island (Sheet 1)	5	1964
65	Livingston, Greenwich, Robert and Nelson Islands (Sheet 2)	4	1962

123. Gt. Brit. Directorate of Overseas Surveys. - (Cont.)
British Antarctic territory. Various scales. INT/G

A provisional issue for positioning place names. (Cont.)

Sheet no.	Area	Edition	Date
66	Snow and Livingston Islands (Sheet 3)	3	1962
67	Admiralty Bay (King George Island)	2	1960
68	Nansen Island Area	3	1961
70	Caird Coast (South)	2	1960
71	Bird Island	3	1964
73	Approaches to Adelaide	2	1964

124. -- British Antarctic territory, Alexander Island. [68 00 - 76 30 W. 70 00 - 72 00 S.] 1st ed. 1963. 1:500,000. Lambert conical orthomorphic. Colored. 26 x 31 in. GS

125. -- British Antarctic territory, Arthur Harbour. 1st ed. 1963. 1:10,000. Mercator projection. Black, white, and gray. 37 x 28 in. (D.O.S. 210). APO GS LC NSF

126. -- British Antarctic territory, Falkland Islands, South Georgia, South Sandwich Islands. [0 00 - 100 00 W. 50 00 - 80 00 S.] 3rd ed. 1964. 1:8,950,000. Colored. 17 x 17 in. GS

127. -- British Antarctic territory, Graham Land. [45 00 - 70 00 W. 60 00 - 75 00 S.] 1st ed. 1963. 1:3,000,000. Polar stereographic projection. Colored. 22 x 27 in. GS

128. -- British Antarctic territory (north of 75°S) with South Georgia and South Sandwich Islands. 1963. 1:3,000,000. (D.O.S. 813). APO LC

129. -- British Antarctic territory, South Orkney Islands. [45 06 - 46 22 W. 60 28 - 60 50 S.] 1st ed. 1963. 1:100,000. Lambert conical orthomorphic. Colored. 25 x 33 in. GS

130. -- Falkland Islands and dependencies and British Antarctic territory. 2nd ed. 1962. 1:9,200,000. Colored. 15 x 16 in. Series sheet. AGS LC

131. -- 3rd ed. 1964. LC

132. Gt. Brit. Hydrographic Office.
The Antarctic. Latitude 59 27 S. to 75 00 S., longitude 29 00 W. to 92 27 W. [Chart 3175.] 1962. 1:2,750,000. Mercator projection. Uncolored. 39 x 27 in.
LC G3201s.P5 var .G7

133. -- Antarctic Ocean - South Orkney Islands. [Chart 1775.] 1959. Various scales. Uncolored. 8 charts on sheet 39 x 27 in.
LC G3201s.P5 var .G7

134. -- Antarctica - Graham Land - Bismarck Strait, with Lemaire Channel, French Passage and Penola Strait. [Chart 3572.] Aug. 1960. 1:100,000. Mercator projection. Uncolored. 39 x 27 in.
LC G3201s.P5 var .G7

135. -- Antarctica - Graham Land - Brabant Island to Adelaide Island. [63 37 - 68 08 S, 60 43 - 68 W.] [Chart 3570.] 1962. 1:500,000. Mercator projection. Uncolored. 26 x 40 in.
LC G3201s.P5 var .G7

136. -- Antarctica - Graham Land - Gerlache Strait, C. Murray to C. Willems. [Chart 3566.] Aug. 1961. 1:200,000. Mercator projection. Uncolored. 26 x 20 in.
APO LC G3201s.P5 var .G7

137. -- Antarctica - Graham Land - Grandidier Channel. [Chart 3573.] Aug. 1960. 1:200,000. Mercator projection. Uncolored. 26 x 20 in.
LC G3201s.P5 var .G7

138. -- Antarctica - Graham Land - Lavoisier Island to Alexander Island. [66 - 70 07 S., 66 - 73 17 W.] [Chart 3571.] Jul. 1961. 1:500,000. Mercator projection. Uncolored. 26 x 40 in.
LC G3201s.P5 var .G7

139. -- Antarctica - Plans in Graham Land. [Chart 3213.] Aug. 1960. Various scales. Gnomonic projection. Uncolored. 13 charts on one sheet. Over-all size 39 x 27 in.
LC G3201s.P5 var .G7

140. -- Antarctica - South Shetland Islands and Bransfield Strait. [60 50 - 64 12 S., 53 - 64 02 W.] [Chart 3205.] 1962. 1:500,000. Mercator projection. Uncolored. 39 x 27 in.
LC G3201s.P5 var .G7

141. -- Plans in the South Shetland Islands. [Chart 1774.] 1962. Various scales. Uncolored. 8 charts on sheet 26 x 39 in.
LC G3201s.P5 var .G7

142. Gt. Brit. Hydrographic Office
Southern Ocean - South Sandwich Islands. [Chart 3593.] Sept. 1960. 1:500,000. Mercator projection. Uncolored. 26 x 40 in. LC G3201s.P5 var .G7

143. -- South Shetland Island - Deception Island. [Chart 3202.] 1959. 1:50,000. Mercator projection. Uncolored. 39 x 27 in. LC G3201s.P5 var .G7

Includes insets showing "Walers Bay and approaches" and "Pendulum Cove."

144. Linton, D. L.
Some related climatic distributions, British Antarctic territory. 1963. 1:17,000,000. Uncolored. 8 x 6 in. In his "Some contrasts in landscapes in British Antarctic territory," Royal Geographical Society. Geographical journal, v. 129, Sept. 1963. fig. 3.

Indicates "mean monthly isotherms, January," "0° C monthly isotherms, January," and "suggested run of lines of equal mean annual precipitation."

145. Searle, D. J. H.
The changing map of Alexander and Charcot Islands. [1963] 1:7,100,000. Colored. 10 maps on sheet 12 x 8 in. In his "The Evolution of the Map of Alexander and Charcot Islands, Antarctica," Geographical journal, v. 129, part 2, June 1963, fig. 2, opp. 166. LC G7.R91

146. -- British Antarctic territory; Alexander Island and Charcot Island. [1959-1960] 1:1,000,000. Colored. 14 x 19 in. In his "The Evolution of the Map of Alexander and Charcot Islands, Antarctica," Geographical journal, v. 129, part 2, June 1963, fig. 3, opp. p. 256 LC G7.R91

147. U.S. Naval Oceanographic Office.
Palmer Peninsula - Danco Coast: Dallmann Bay to Deception Bay. [62 58 S.; 64 28 S. - 58 30 W.; 63 50 W.] [Chart. 6944.] 1st ed. Nov. 1963. 1:200,000. Mercator projection. Colored. 32 x 50 in. NAVOCEANO

148. -- Palmer Peninsula - Graham and Danco Coasts: Argentine Islands to Dallmann Bay. [63 55 S.; 65 22 S. - 61 20 W.; 66 40 W.] [Chart 6945.] 1st ed. Nov. 1963. 1:200,000. Mercator projection. Colored. 32 x 50 in. NAVOCEANO

ANTARCTIC PENINSULA AND SURROUNDING AREAS - (Cont.)

149. U.S. Naval Oceanographic Office.
Plans on Palmer Peninsula and adjacent islands. [Chart 6650.] 2nd ed. Nov. 1963. 1:8,000 to 1:50,000. Mercator projection. Colored. 45 x 29 in. 10 plans on one sheet: NAVOCEANO

(A)	Melchior Islands	1:35,000	(F)	Arthur Harbor	1:12,500
(B)	Cape Legoupil	1:15,000	(G)	Waterboat Point	1:8,000
(C)	Port Lockroy	1:10,000	(H)	Neny Island	1:50,000
(D)	Argentine Islands	1:15,000	(I)	Prospect Point	1:50,000
(E)	Hope Bay	1:30,000	(J)	Lystad Bay	1:50,000

150. -- South Shetland Islands: Deception Island to King George Island. [61 35 W. 63 10 S. - 57 30 W. 62 50 W.] 1st ed. Nov. 1963. 1:200,000. Mercator projection. Colored. 32 x 50 in. NAVOCEANO

151. Wisconsin. University.
Geologic map of Antarctica. [63 11 - 63 19 S. 57 42 - 58 04 W.] 1963. Ozalid. 50 x 27 in. Planimetric. INT/G GS

BUDD COAST

152. Australia. Division of National Mapping.
Budd Coast, Vincennes Bay, approaches to Wilkes Station. [66 08 - 66 26 S. 109 43 - 110 46 E.] 1962. Mercator projection. Colored. 44 x 28 in. GS

COATS LAND

153. Gt. Brit. Foreign Office. Research Dept.
Coats Land. Prov. ed. 1962. 1:200,000. Photo. GS

Sheet no.	Coordinates
W 77 34 & 77 32	77 - 78 S 32 - 36 W
W 78 26 & 78 24	78 - 79 S 24 - 28
W 78 38 & W 78 36	78 - 79 S 36 - 40 W
W 79 26 & W 79 24	79 - 80 S 24 - 28 W
W 79 30 & 79 28	79 - 80 S 28 - 32 W

COATS LAND - (Cont.)

153. Gt. Brit. Foreign Office. Research Dept. GS
Coats Land. Prov. ed. 1962. 1:200,000. Photo. - (Cont.)

Sheet no.	Coordinates
W 80 22 & W 80 20	80 - 81 S 20 - 24 W
W 80 26 & W 80 24	80 - 81 S 24 - 28 W
W 80 30 & W 80 28	80 - 81 S 28 - 32 W
W 81 30 & W 81 28	81 - 82 S 28 - 32 W

EIGHTS COAST

154. Behrendt, John C.
Bedrock elevation of Eights Coast and Robert English Coast. Mar. 1964. 1:3,900,000. Stereographic projection. In his "Antarctic Peninsula traverse geophysical results relating to glaciological and geological studies." (Geophysical and Polar Research Center. Research report no. 64-1, Mar. 1964). GPRC

155. -- Bouguer anomaly, Eights Coast and Robert English Coast. Mar. 1964. 1:3,900,000. Stereographic projection. In his "Antarctic Peninsula traverse geophysical results relating to glaciological and geological studies." (Geophysical and Polar Research Center. Research report no. 64-1, Mar. 1964). GPRC

156. -- Free air anomaly, Eights Coast and Robert English Coast. Mar. 1964. 1:3,900,000. Stereographic projection. In his "Antarctic Peninsula traverse geophysical results relating to glaciological and geological studies." (Geophysical and Polar Research Center. Research report no. 64-1, Mar. 1964). GPRC

157. -- Residual aeromagnetic profiles of Eights Coast and Robert English Coast. Mar. 1964. 1:3,900,000. Stereographic projection. In his "Antarctic Peninsula traverse geophysical results relating to glaciological and geological studies." (Geophysical and Polar Research Center. Research report no. 64-1, Mar. 1964). GPRC

EIGHTS COAST - (Cont.)

158. Behrendt, John C.
Snow surface elevation map showing traverse routes. APT stations numbered at approximately 1.45 km intervals. Eights Coast and Robert English Coast. Mar. 1964. 1:3,900,000. Stereographic projection. In his "Antarctic Peninsula traverse geophysical results relating to glaciological and geological studies." (Geophysical and Polar Research Center. Research report no. 64-1, Mar. 1964). GPRC

ELLSWORTH LAND

159. Behrendt, John C.
Snow surface elevation map showing traverse route. Refraction stations 432, 604, 700, 796, and 908. [65 to 95 West Long.] 1961-62. 1:7,000,000. Uncolored. 6 x 4 in. In his "Seismic measurements on the ice sheet of the Antarctic Peninsula," Journal of geophysical research, v. 68, November 1, 1963. fig. 2. LC QC811.J6

160. -- Subglacial topography map constructed from seismic reflection and gravity depth determinations. [65 to 95 West Long.] 1961-62. 1:7,000,000. Monochrome. 6 x 4 in. In his "Seismic measurements on the ice sheet of the Antarctic Peninsula," Journal of geophysical research, v. 68, November 1, 1963. fig. 5. LC QC811.J6

ENDERBY LAND

161. Australia. Division of National Mapping.
Australian Antarctic territory: Enderby Land. 1:250,000. Universal transverse Mercator projection. Colored. 24 x 26 in. Series sheets. APO LC

Sheet no.	Edition	Date
SQ 38-39	1st	3-63
SQ 38-39	1st	8-62
SQ 38-39	1st	8-62

162. -- Enderby Land. 1962. 1:100,000. Transverse Mercator projection. Series sheets. GS

Sheet no.	Date
SQ 38-39/8c	1962
SQ 38-39/8d	1962
SQ 38-39/12a	1962

162. Australia. Division of National Mapping.- (Cont.)
Enderby Land. 1962. 1:100,000. Transverse Mercator projection. Series sheets. GS

Sheet no.	Date
SQ 38-39/12b	1962
SQ 38-39/12c	1962
SQ 38-39/12d	1962
SQ 38-39/13d	1961
SQ 38-39/14a	1961
SQ 38-39/14b	1961
SQ 38-39/14c	1961
SQ 38-39/14d	1961
SQ 38-39/15a	1960
SQ 38-39/15b	1960
SQ 38-39/15c	1960
SQ 38-39/15d	1960
SQ 38-39/16a	1962
SQ 38-39/16b	1962
SQ 38-39/16c	1962
SQ 38-39/16d	1962
SQ 40-41/5a	1962
SQ 40-41/9a	1962
SQ 40-41/9b	1962
SQ 40-41/9c	1962
SQ 40-41/9d	1962
SQ 40-41/10c	1962
SQ 40-41/13a	1962
SQ 40-41/13b	1962
SQ 40-41/13c	1962
SQ 40-41/13d	1962
SQ 40-41/14a	1962
SQ 40-41/14b	1962
SQ 40-41/14c	1962
SQ 40-41/14d	1962
SQ 40-41/15a	1963
SQ 40-41/15b	1963
SQ 40-41/15c	1963
SQ 40-41/15d	1963
SQ 40-41/16a	1963
SQ 40-41/16c	1963
SQ 40-41/16d	1963
SR 38-39/1a	1962
SR 38-39/1b	1962
SR 38-39/2b	1962
SR 38-39/3a	1960

ENDERBY LAND - (Cont.)

162. Australia. Division of National Mapping. - (Cont.)
Enderby Land. 1962. 1:100,000. Transverse Mercator projection. Series sheets. GS

Sheet no.	Date
SR 38-39/3b	1960
SR 38-39/4b	1962
SR 38-39/4c	1962
SR 40-41/1a	1962
SR 40-41/2a	1963
SR 40-41/2b	1963
SR 40-41/3b	1963
SR 40-41/3d	1963
SR 40-41/4a	1963
SR 40-41/4b	1963
SR 40-41/4c	1963
SR 40-41/4d	1963
SR 40-41/8a	1961
SR 40-41/8b	1961
SR 40-41/8c	1961
SR 40-41/8d	1961

163. Cumpston, John.
B.A.N.Z.A.R.E. 1930. [Map of Enderby Land showing 1930 coastline and tracks of the British-Australian-New Zealand Antarctic Research Expedition.] 1:4,100,000. Uncolored. 5 x 3 in. In his "The Antarctic landfalls of John Biscoe, 1831," Royal Geographical Society. Geographical journal, v. 129, June 1963. fig. 2. LC G7.R91

164. -- John Biscoe 1831. [Map of coast of Enderby Land showing tracks of John Biscoe.] [43 to 53 East] 1963. 1:4,100,000. Monochrome. 5 x 6 in. In his "The Antarctic landfalls of John Biscoe, 1831," Royal Geographical Society. Geographical journal, v. 129, June 1963. fig. 1. LC G7.R91

INGRID CHRISTENSEN COAST

165. Australia. Division of National Mapping.
Vestfold Hills, Australian Antarctic territories. 1958. 1:100,000. Colored. 13 x 17 in. DCL

HERITAGE RANGE

166. U.S. Geological Survey.
Heritage Range. Sheets 1-7. [79 00 - 81 30 S. 77 30 - 87 00 W.] 1961. 1:80,000. Polar stereographic projection. Monochrome. 26 x 42 in. Planimetric. GS

Unpublished, compiled in 1962.

167. -- Heritage Range sketch map. [78 40 - 80 00 S. 83 00 - 89 00 W.] 1962. 1:250,000. Lambert conformal conic projection. Monochrome. 31 x 24 in. Planimetric. GS

Unpublished, compiled in 1963.

MARIE BYRD LAND

168. Behrendt, John C. and Richard J. Wold.
Bedrock elevation map showing calculated depths to sources of magnetic anomalies, Marie Byrd Land. Jan. 1963. 1:7,800,000. Stereographic projection. In their "Aeromagnetic survey in west Antarctica 1963." (Geophysical and Polar Research Center. Research report no. 63-1, Jan. 1963). GPRC

169. -- Bedrock elevation map showing location of control used in its construction, Marie Byrd Land. Jan. 1963. 1:3,900,000. Stereographic projection. In their "Aeromagnetic survey in west Antarctica 1963." (Geophysical and Polar Research Center. Research report no. 63-1, Jan. 1963). GPRC

170. -- 3^{o} Total magnetic intensity -- 3^{o} Least square polynomial surface fitted to data, Marie Byrd Land. Jan. 1963. 1:3,900,000. Stereographic projection. In their "Aeromagnetic survey in west Antarctica 1963." (Geophysical and Polar Research Center. Research report no. 63-1, Jan. 1963). GPRC

171. -- 11^{o} Total magnetic intensity -- 11^{o} Least square polynomial surface fitted to data, Marie Byrd Land. Jan. 1963. 1:3,900,000. Stereographic projection. In their "Aeromagnetic survey in west Antarctica 1963." (Geophysical and Polar Research Center. Research report no. 63-1, Jan. 1963). GPRC

MARIE BYRD LAND - (Cont.)

172. Behrendt, John C. and Richard J. Wold
11° - 3° Total magnetic intensity - Map showing difference between 11° and 3° surfaces, Marie Byrd Land. Jan. 1963. 1:3,900,000. Stereographic projection. In their "Aeromagnetic survey in west Antarctica 1963." (Geophysical and Polar Research Center. Research report no. 63-1, Jan. 1963). GPRC

173. -- Map showing location and designation of aeromagnetic flights. Anomalies greater than 200 are indicated, Marie Byrd Land. Jan. 1963. 1:7,800,000. Stereographic projection. In their "Aeromagnetic survey in west Antarctica 1963." (Geophysical and Polar Research Center. Research report no. 63-1, Jan. 1963). GPRC

174. -- Profiles of aeromagnetic flights with regional slope removed, Marie Byrd Land. Jan. 1963. 1:7,800,000. Stereographic projection. In their "Aeromagnetic survey in west Antarctica 1963." (Geophysical and Polar Research Center. Research report no. 63-1, Jan. 1963). GPRC

175. Behrendt, John C., R. J. Wold and F. L. Dowling.
Surface elevation Marie Byrd Land, contour interval 100 meters. Mar. 1962. Stereographic projection. Uncolored. 5 x 9 in. In their "Ice surface elevation of central Marie Byrd Land," Journal of glaciology, v. 4, no. 31, Mar. 1962. GPRC

176. U.S. Naval Oceanographic Office.
Marie Byrd Land - Walgreen and Eights Coast: Thwaites Ice Tongue to Thurston Island. [70 00 S.; 76 00 S. - 95 00 W.; 109 00 W.] [Chart 6633.] 3rd ed. Oct. 1962. 1:500,000. Mercator projection. Monochrome. 48 x 32 in. NAVOCEANO

PRINCE OLAV COAST

177. Japan. Chiri Chosa Sho.
Lutzow-Holm Bay. [68 30 - 70 30 S. 37 00 - 40 30 E.] 1963. 1:250,000. Lambert conformal conic. Colored. 30 x 42 in. Topographic. GS

178. -- Prince Olav Coast. [67 40 - 69 00 S. 40 30 - 45 00 E.] 1963. 1:250,000. Lambert conformal conic. Colored. 30 x 42 in. GS

179. -- Showa Kichi (Showa Station) [39 35 24 E. 69 00 22 S.] 1957. 1:1,000. Monochrome. 24 x 19 in. GS

PRINCESS ASTRID COAST

180. Belgium. Institut Géographique Militaire.
Princess Astrid Coast, east part. 1960. 1:250,000. Lambert conformal projection. At head of title: Belgian Antarctic Expedition, 1959-60. SR 33-34 on IGM index. Colored. DCL

PRINCESS RAGNILD COAST

181. Belgium. Institut Géographique Militaire.
Princess Ragnhild Coast, east part and west part. 1960. 1:250,000. Lambert conformal projection. At head of title: Belgian Antarctic Expedition,1959-1960. 35 x 20. SR 35-36, 33-34 on IGM index. Colored. DCL

QUEEN MAUD LAND

182. Belgium. Institut Géographique Militaire.
Third Belgian Antarctic Expedition 1959-1960. Operation Iris. Belgica Mountains. 1963. 1:25,000. Lambert orthomorphic conical projection. Colored. 38 x 36 in. "Contour interval: 30 metres." APO DCL GS LC

183. Japan. Chiri Chosa Sho.
East Ongul Island. 1957. 1:5,000. Colored. NSF

184. Norsk Polarinstitutt.
Dronning Maud Land. 1962. 1:250,000. Colored. 19 x 24 in. Series sheets. GS LC

Sheet no. and name

F5 Giaeverryggen
F6 Borgmassivet
J6 Mühlig-Hofmannfjella Sör
K6 Filchnerfjella Sör

QUEEN MAUD RANGE

185. Herbert, W. W.
Axel Heiberg Glacier region. Dec. 1963. 1:316,800. Colored. 12 x 14 in. In his "In Amundsen's tracks on the Axel Heiberg Glacier," Royal Geographical Society, London. Geographical journal, v. 129, Dec. 1963. opp. p. 410. INT/G LC

186. -- Queen Maud Range. Dec. 1963. 1:1,267,200. Colored. 12 x 9 in. In his "In Amundsen's tracks on the Axel Heiberg Glacier," Geographical journal, v. 129, Dec. 1963. opp. p. 410. INT/G LC

QUEEN MAUD RANGE - (Cont.)

187. New Zealand Geological and Survey Expedition, 1961-62.
Liv Glacier sketch map [84 30 - 85 50 S. 162 - 174 W.]
1962. 1:250,000. Photo. 23 x 23 in. Unpublished. GS

188. New Zealand Geological and Survey Expedition, 1961-62 (Southern Party). Beardmore - Axel Heiberg Regions Survey [manuscript]
1962. 1:250,000. APO INT/G

ROSS SEA AREA

189. Crary, A. P. and others.
Annual net snow accumulation, in g/cm^3, Ross Ice Shelf.
Jul. 1962. Stereographic projection. In their "Glaciological regime of the Ross Ice Shelf," Journal of geophysical research v. 67, no. 7, Jul. 1962. GPRC

190. -- Average annual surface temperature, in degrees centigrade, Ross Ice Shelf. Jul. 1962. 1:6,443,700. Stereographic projection. In their "Glaciological regime of the Ross Ice Shelf," Journal of geophysical research v. 67, no. 7, Jul. 1962. GPRC

191. -- Average snow density from the surface to 2 meters depth, in $g/cm^3 \times 10^3$, Ross Ice Shelf. Jul. 1962. Stereographic projection. In their "Glaciological regime of the Ross Ice Shelf," Journal of geophysical research v. 67, no. 7, Jul. 1962. GPRC

192. -- Depth of ocean floor below sea level, in meters, Ross Ice Shelf. Jul. 1962. Stereographic projection. In their "Glaciological regime of the Ross Ice Shelf," Journal of geophysical research v. 67, no. 7, Jul. 1962. GPRC

193. -- Snowshed area of the Ross Ice Shelf, as obtained from elevations, Ross Ice Shelf. Jul. 1962. Stereographic projection. In their "Glaciological regime of the Ross Ice Shelf," Journal of geophysical research v. 67, no. 7, Jul. 1962. GPRC

194. -- Thickness of ice, in meters, Ross Ice Shelf. Jul. 1962. Stereographic projection. In their "Glaciological regime of the Ross Ice Shelf," Journal of geophysical research v. 67, no. 7, Jul. 1962. GPRC

195. Gt. Brit. Hydrographic Office.
Antarctica - Ross Sea to South Pole. [Chart 3177.] Apr. 1961. 1:4,000,000. Polar stereographic projection. Uncolored. 26 x 20 in. LC G3201s.P5 var .G7

ROSS SEA AREA - (Cont.)

196. Gt. Brit. Hydrographic Office.
The Antarctic - Ross Sea, northern portion, [59 30 - 75 S., 147 30 E. - 149 W.] [Chart 3173.] Mar. 1961. 1:2,750,000. Mercator projection. Uncolored. 39 x 27 in.
LC G3201s.P5 var .G7

197. New Zealand. Dept. of Scientific and Industrial Research. Antarctic Division. Oceanographic surveys: Ross Sea cruises 1959-60. 1959. 1:2,750,000. Monochrome. 8 x 7 in.
DCL Stefansson Collection

Appended to: Ross Dependency Research Committee, New Zealand Antarctic programme 1959-1960.

198. -- Plan of Scott Base, Pram Point, Ross Dependency. Geological and Survey Expedition, 1958-59. 1959. 1:1,025.
DCL Stefansson Collection

Appended to: Ross Dependency Research Committee, New Zealand Antarctic programme, 1959-60.

199. New Zealand. Dept. of Lands and Survey.
Cape Crozier. [77 27 - 77 37 S. 169 00 - 169 33 E.] 1st ed. Sept. 1962. 1:50,000. Colored. 11 x 17 in. "Reconnaissance series". LC G9802.C7 1962.N4

200. Robinson, Edwin S.
Bathymetric chart of McMurdo Sound compiled from seismic soundings, echo soundings, and gravimetric soundings, 100 meter isobath interval. Nov. 1962. Stereographic projection. In his "Geophysical investigations in McMurdo Sound, Antarctica," Journal of geophysical research, v. 68, no. 1, Jan. 1963. GPRC

201. Society of American Engineers.
Roosevelt Island, Ross Ice Shelf. 1962. 1:3,200,000. Uncolored. 5 x 6 in. In its "Surveys and maps: Ice flow mapping in Antarctica," Military engineer, v. 54, Nov.-Dec. 1962. p. 450, fig. 1. LC

Map of Roosevelt Island showing "charted outline" and "actual outline," traverses, "seismic soundings by Poulter," "surveyed network" and "planned network extension."

202. U.S. Geological Survey.
Cape Crozier, Ross Island, Antarctica. [77 29 S. - 169 34 E.] Nov. 1963. 1:2,400. Monochrome. 41 x 48. in. GS

Topographic. Unpublished.

ROSS SEA AREA - (Cont.)

203. U.S. Naval Oceanographic Office.
Ross Sea - Victoria Land: Cape Downshire to Tucker Inlet. [71 30 S. 72 45 S. - 169 41 E. 172 17 W.] [Chart 6626.] 2nd ed. Sept. 1962. 1:100,000. Mercator projection. Monochrome. 50 x 32 in. NAVOCEANO

204. -- Scott Island and approaches. [66 56 S. 67 40 S. - 178 30 W. 179 45 E.] [Chart 6668.] 3rd ed. Sept. 1962. 1:100,000. Mercator projection. Monochrome. 33 x 50 in. NAVOCEANO

VICTORIA LAND

205. Australia. Division of National Mapping.
Australian Antarctic territory. Mac. Robertson Land, Framnes Mountains. 1st ed. 1963. 1:100,000. Universal transverse Mercator. Colored. 41 x 36 in. GS LC

206. New Zealand.
Mawson and Aviator Glaciers. [73 00 - 76 30 S. 158 - 168 E.] 1962. 1:500,000. Unpublished manuscript. 30 x 38 in. GS

207. New Zealand Federated Mountain Clubs Antarctic Expedition, 1962-63. The Pearl Harbour Glacier region. [71 30 - 72 45 S. 164 - 169 E.] 1962-63. 1:250,000. Photo. 30 x 36 in. GS

208. -- Sketch of Upper Tucker Glacier. [71 08 - 72 45 S. 165 - 167 35 E.] 1:250,000. Photo. 20 x 30 in. GS

Unpublished.

209. New Zealand Geological and Survey Expedition, 1962-63.
The Rennick, Campbell and Mariner Glacier regions. [72 15 - 74 30 S. 160 - 166 E.] 1962-63. 1:250,000. Photo. 36 x 42 in. Unpublished. GS

210. New Zealand. Dept. of Scientific and Industrial Research.
Geology of Mawson - Mulock area, Victoria Land, Antarctica. 1961. 1:250,000. Polar stereographic projection. Colored. 28 x 37 in. 2 sheets. AGS 380 GS

211. New Zealand. Dept. of Scientific and Industrial Research. Antarctic Division. Field parties of NZ Antarctic research programme, summer 1959/60, including RNZAF Antarctic Flight. 1959. 1:5,500,000. Monochrome. 6 x 7 in.
DCL Stefansson Collection

Appended to: Ross Dependency Research Committee, New Zealand Antarctic programme, 1959-1960.

VICTORIA LAND - (Cont.)

212. New Zealand. Geological Survey.
Geology of the Tucker Glacier area, Victoria Land, Antarctica. 1st ed. 1963. 1:250,000. Polar stereographic projection. Colored. 40 x 33 in. LC

Cover title: Geological map of Ross Dependency, Tucker Glacier District.

213. U.S. Geological Survey.
Northern Victoria Land, Antarctica sketch map. [69 00 - 73 00 S. 157 00 - 171 00 E.] 1960-62. 1:500,000. Polar stereographic projection. Monochrome. 42 x 48 in. GS

Unpublished. Planimetric. Compiled in 1963.

214. -- Southwest end of Seabee Hook at Hallett Station. [72 25 S. 170 55 e.] Nov. 1963. 1:1,200. Monochrome. 18 x 24 in. GS

Topographic. Unpublished.

215. Victoria University of Wellington. Antarctic Expedition, 1960-61.
Sketch map of Koettlitz area... 1961. 1:370,000. Monochrome. 7 x 9 in. DCL Stefansson Collection

216. -- Sketch map of the area north of Koettlitz Glacier showing Bouguer anomolies. 1961. 1:370,000. Monochrome. 7 x 10 in. DCL Stefansson Collection

WEDDELL SEA

217. Gt. Brit. Hydrographic Office.
The Antarctic - Weddell Sea [Chart 3176.] Sept. 1960. 1:2,750,000. Mercator projection. Uncolored. 26 x 20 in. LC G3201s.P5 var .G7

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	PHOTOGRAPHY	ORGANIZATION & SORTIE NOS.	DATE	REMARKS	HOLDING ORGANIZATIO
218.	Adelaide Island - United Kingdom Station "T" 67 46 S 68 54 W Total: 91 Focal length: 8.25 in. Alt.: Low, varying Type: Hand held oblique	USN, Mission-2. Roll 2.	1/19&20/63	Film only, 7 x 7 in.	GS
219.	Anvers Island 64 30 S 63 30 W Total: 195 Focal length: 8.25 in. Alt.: Low, varying Type: Hand held oblique	USN, Mission-3. Roll 3.	1/23-26/63	Film only, 7 x 7 in.	GS
220.	Asgard Range 77 12 S 160 00 E 77 28 S 162 00 E Total: 36 Focal length: 6 in. Alt.: 14,000 ft. Type: Vertical	USN, Mission-S 4. Sortie 001. Run 1. TMA-1147.	2/9/63	Prints & film, 9 x 9 in.	GS
221.	Asgard Range 77 12 S 160 00 E 77 28 S 162 00 E Total: 27 Focal length: 6 in. Alt.: 14,000 ft. Type: Vertical	USN, Mission-S 4. Sortie 001. Run 2. TMA-1148.	2/9/63	Prints & film, 9 x 9 in.	GS
222.	Asgard Range 77 12 S 160 00 E 77 28 S 160 00 E Total: 30 Focal length: 6 in. Alt.: 14,000 ft.	USN, Mission-S 4. Sortie 001. Run 3. TMA-1149.	2/9/63	Prints & film, 9 x 9 in.	GS

PHOTOGRAPHY - (Cont.)

	PHOTOGRAPHY	ORGANIZATION & SORTIE NOS.	DATE	REMARKS	HOLDING ORGANIZATION
223.	Asgard Range 77 12 S 160 00 E 77 28 S 160 00 E Total: 27 Focal length: 6 in. Alt.: 14,000 ft. Type: Vertical	USN, Mission-S 4. Sortie 001. Run 4. TMA-1150.	2/9/63	Prints & film, 9 x 9 in.	GS
224.	Asgard Range 77 12 S 160 00 E 77 28 S 160 00 E Total: 34 Focal length: 6 in. Alt.: 14,000 ft. Type: Vertical	USN, Mission-S 4. Sortie 001. Run 5. TMA-1151.	2/9/63	Prints & film, 9 x 9 in.	GS
225.	Asgard Range 77 12 S 160 00 E 77 28 S 160 00 E Total: 22 Focal length: 6 in. Alt.: 8,500 ft. Type: Vertical	USN, Mission-S 4. Sortie 001. Run 6. TMA-1152.	2/9/63	Prints & film, 9 x 9 in.	GS
226.	Asgard Range 77 12 S 160 00 E 77 28 S 160 00 E Total: 21 Focal length: 6 in. Alt.: 10,000 ft. Type: Vertical	USN, Mission-S 4. Sortie 001. Run 7. TMA-1153.	2/9/63	Prints & film, 9 x 9 in.	GS
227.	Bay of Whales 78 35 S 164 20 W Total: 24 Focal length: 6 in. Alt.: 5,000 ft. Type: Vertical	USN, Mission-S 10. Sortie 001. Run 1. TMA-1084.	12/17/61	Prints & film, 9 x 9 in.	GS
228.	Bay of Whales 78 35 S 164 20 W Total: 26 Focal length: 6 in. Alt.: 4,700 ft. Type: Vertical	USN, Mission-S 10. Sortie 001. Run 2. TMA-1085.	12/17/61	Prints & film, 9 x 9 in.	GS

PHOTOGRAPHY - (Cont.)

	PHOTOGRAPHY	ORGANIZATION & SORTIE NOS.	DATE	REMARKS	HOLDING ORGANIZATIO
229.	Bay of Whales 78 35 S 164 20 W Total: 26 Focal length: 6 in. Alt.: 4,700 ft. Type: Vertical	USN, Mission-S 10. Sortie 001. Run 3. TMA-1086.	12/17/61	Prints & film, 9 x 9 in.	GS
230.	Bay of Whales 78 35 S 164 20 W Total: 25 Focal length: 6 in. Alt.: 4,700 ft. Type: Vertical	USN, Mission-S 10. Sortie 001. Run 4. TMA-1087.	12/17/61	Prints & film, 9 x 9 in.	GS
231.	Bay of Whales 78 35 S 164 20 W Total: 23 Focal length: 6 in. Alt.: 4,700 ft. Type: Vertical	USN, Mission-S 10. Sortie 001. Run 5. TMA-1088.	12/17/61	Prints & film, 9 x 9 in.	GS
232.	Beaufort Island 77 00 S 166 55 E Total: 18 prints, left oblique Focal length: 6 in. Type: Trimetrogon, F32 & F33 missing	USN, Mission-S 2. Reconnaissance Sortie 001. Run 4. TMA-1016.	11/14/62	Prints & Film, 9 x 9 in.	GS
233.	Brabant Island 64 15 S 62 20 W Total: 32 Focal length: 8.25 in. Alt.: Low, varying Type: Hand held oblique	USN, Mission-9. Roll 8.	2/8/63	Film only, 7 x 7 in.	GS
234.	Britannia Range 81 30 S 156 45 E 81 20 S 152 00 E Total: 32 sets Focal length: 6 in. Alt.: 20,000 ft. Type: Trimetrogon, F32 missing	USN, Mission-M 1. Sortie 003. Run 5. TMA-1007.	11/12/62	Prints & film, 9 x 9 in.	GS

PHOTOGRAPHY - (Cont.)

	PHOTOGRAPHY	ORGANIZATION & SORTIE NOS.	DATE	REMARKS	HOLDING ORGANIZATION
235.	Britannia Range 82 04 S 154 30 E 81 15 S 154 30 E Total: 28 Focal length: 6 in. Alt.: 20,000 ft. Type: Trimetrogon, F32 missing	USN, Mission-M 1. Sortie 003. Run 4. TMA-1008.	11/12/62	Prints & film, 9 x 9 in.	GS
236.	Britannia Range 80 48 S 157 30 E 78 58 S 157 30 E Total: 84 Focal length: 6 in. Alt.: 20,000 ft. Type: Trimetrogon, F31 & F33 cameras only	USN, Mission-M 1. Sortie 004. Run 1. TMA-1011.	11/13/62	Prints & film, 9 x 9 in.	GS
237.	Britannia Range 78 00 S 156 00 E 80 40 S 156 00 E Total: 95 sets Focal length: 6 in. Alt.: 20,000 ft. Type: Trimetrogon	USN, Mission-M 1. Sortie 002. Run 2. TMA-1002.	11/4/62	Prints & film, 9 x 9 in.	GS
238.	Britannia Range 79 42 S 153 30 E 80 02 S 156 45 E Total: 34 sets Focal length: 6 in. Alt.: 20,000 ft. Type: Trimetrogon	USN, Mission-M 1. Sortie 002. Run 3. TMA-1003.	11/4/62	Prints & film, 9 x 9 in.	GS
239.	Britannia Range 81 29 S 156 00 E 81 20 S 152 00 E Total: 40 sets Focal length: 6 in. Alt.: 20,000 ft. Type: Trimetrogon	USN, Mission-M 1. Sortie 005. Run 4. TMA-1154.	2/9/63	Prints & film, 9 x 9 in.	GS

PHOTOGRAPHY - (Cont.)

	PHOTOGRAPHY	ORGANIZATION & SORTIE NOS.	DATE	REMARKS	HOLDING ORGANIZATIO
240.	Britannia Range 81 18 S 154 45 E 82 00 S 154 37 E Total: 55 sets Focal length: 6 in. Alt.: 20,000 ft. Type: Trimetrogon	USN, Mission-M 1. Sortie 005. Run 5. TMA-1155.	2/9/63	Prints & film, 9 x 9 in.	GS
241.	Britannia Range 82 00 S - 154 45 E 82 14 S - 154 45 E Total: 36 sets Focal length: 6 in. Alt.: 20,000 ft. Type: Trimetrogon	USN, Mission-M 1. Sortie 006. Run 5. TMA-1142.	2/10/63	Prints & film, 9 x 9 in.	GS
242.	Britannia Range 80 51 S 157 30 E 78 57 S 157 30 E Total: 94 sets Focal length: 6 in. Alt.: 20,000 ft. Type: Trimetrogon	USN, Mission-M 1. Sortie 006. Run 1. TMA-1143.	2/10/63	Prints & film 9 x 9 in.	GS
243.	Britannia Range 81 45 S 158 00 E 81 47 S 160 00 E Total: 12 sets Focal length: 6 in. Alt.: 20,000 ft. Type: Trimetrogon	USN, Mission-M 1. Sortie 001. Run 4. TMA-991.	11/2/62	Prints & film, 9 x 9 in.	GS
244.	Britannia Range 81 14 S 157 00 E 81 26 S 151 45 E Total: 26 sets Focal length: 6 in. Alt.: 20,000 ft. Type: Trimetrogon	USN, Mission-M 1. Sortie 001. Run 4. TMA-992.	11/2/62	Prints & film, 9 x 9 in.	GS

PHOTOGRAPHY - (Cont.)

	PHOTOGRAPHY	ORGANIZATION & SORTIE NOS.	DATE	REMARKS	HOLDING ORGANIZATION
245.	Britannia Range 81 10 S 154 00 E 81 30 S 154 00 E Total: 38 sets Focal length: 6 in. Alt.: 20,000 ft. Type: Trimetrogon	USN, Mission-M 1. Sortie 001. Run 5. TMA-993.	11/2/62	Prints & film, 9 x 9 in.	GS
246.	Britannia Range 78 50 S 157 30 E 80 48 S 157 30 E Total: 79 sets Focal length: 6 in. Alt.: 20,000 ft. Type: Trimetrogon	USN, Mission-M 1. Sortie 001. Run 1. TMA-994.	11/2/62	Prints & film, 9 x 9 in.	GS
247.	Britannia Range 79 00 S 156 00 E 80 14 S 156 00 E Total: 38 sets Focal length: 6 in. Alt.: 20,000 ft. Type: Trimetrogon	USN, Mission-M 1. Sortie 001. Run 2. TMA-995.	11/2/62	Prints & film, 9 x 9 in.	GS
248.	Coulman Island 73 08 S 169 35 E 73 19 S 169 42 E Total: 23 Focal length: 6 in. Alt.: 7,000 ft. Type: Trimetrogon	USN, Mission-S 5e. Sortie 008. Run 6. TMA-1056.	11/17/62	Film only, 9 x 9 in.	GS
249.	Coulman Island 73 12 S 169 40 E 73 32 S 169 40 E Total: 29 Focal length: 6 in. Alt.: 1,000 ft. Type: Trimetrogon, F32 camera only	USN, Mission-S 2a. Sortie 002. Run 2. TMA-1043.	11/18/62	Prints & film, 9 x 9 in.	GS

PHOTOGRAPHY - (Cont.)

	PHOTOGRAPHY	ORGANIZATION & SORTIE NOS.	DATE	REMARKS	HOLDING ORGANIZATIO
250.	Coulman Island 73 12 S 169 40 E 73 32 S 169 40 E Total: 113 Focal length: 6 in. Alt.: 500 ft. Type: Trimetrogon, F32 camera only	USN, Mission-S 2a. Sortie 002-1. TMA-1042.	11/18/62	Prints & film, 9 x 9 in.	GS
251.	Coulman Island, penguin rookery and seal population studies Total: 26 sets Focal length: 6 in. Alt.: 1,500 ft. Type: Trimetrogon	USN, Mission-S 2a. Sortie 004. Run 2. TMA-1070.	11/28/62	Prints & film, 9 x 9 in.	GS
252.	Coulman Island, penguin rookery and seal population studies Total: 49 sets Focal length: 6 in. Alt.: 1,500 ft. Type: Trimetrogon	USN, Mission-S 2a. Sortie 001. Run 3. TMA-1071.	11/28/62	Prints & film, 9 x 9 in.	GS
253.	Coulman Island, penguin rookery and seal population studies Total: 32 Focal length: 6 in. Type: Trimetrogon, F32 camera only	USN, Mission-S 10. Sortie 001. Run 1. TMA-1072.	11/28/62	Prints & film, 9 x 9 in.	GS
254.	Coulman Island, penguin rookery and seal population studies Total: 32 sets Focal length: 6 in. Alt: 1,500 ft. Type: Trimetrogon	USN, Mission-S 2a. Sortie 004. Run 1. TMA-1069.	11/28/62	Prints & film, 9 x 9 in.	GS

PHOTOGRAPHY - (Cont.)

	PHOTOGRAPHY	ORGANIZATION & SORTIE NOS.	DATE	REMARKS	HOLDING ORGANIZATION
255.	Coulman Island 73 30 S 169 59 E Total: 14 prints, left oblique Focal length: 6 in. Alt.: 1,000 ft. Type: Trimetrogon, F32 & F33 missing	USN, Mission-S 2a. Sortie 001. Run 1. TMA-1014.	11/14/62	Prints & film, 9 x 9 in.	GS
256.	Coulman Island 73 30 S 169 59 E Total: 5 prints, left oblique 33 prints, right oblique Focal length: 6 in. Alt.: 800 ft. Type: Trimetrogon, F32 missing	USN, Mission-S 2a. Sortie 001. Run 3. TMA-1015.	11/14/62	Prints & film, 9 x 9 in.	GS
257.	Crozier, Cape 77 24 S 169 00 E 77 30 S 169 45 E Total: 25 Focal length: 6 in. Alt.: 3,000 ft. Type: Trimetrogon, F32 camera only	USN, Mission-S 2b. Sortie 005. Run 1. TMA-1157.	2/22/63	Prints & film, 9 x 9 in.	GS
258.	Crozier, Cape 77 24 S 169 00 E 77 30 S 169 45 E Total: 19 Focal length: 6 in. Alt.: 3,000 ft. Type: Trimetrogon	USN, Mission-S 2b. Sortie 005. Run 2. TMA-1158.	2/22/63	Prints & film, 9 x 9 in.	GS
259.	Crozier, Cape 77 24 S 169 00 E 77 30 S 169 45 E Total: 24 Focal length: 6 in. Alt.: 3,000 ft. Type: Trimetrogon, F32 camera only	USN, Mission-S 2b. Sortie 005. Run 3. TMA-1159.	2/22/63		GS

PHOTOGRAPHY - (Cont.)

	PHOTOGRAPHY	ORGANIZATION & SORTIE NOS.	DATE	REMARKS	HOLDING ORGANIZATIO
260.	Crozier, Cape 77 24 S 169 00 E 77 30 S 169 45 E Total: 11 Focal length: 6 in. Alt.: 5,000 ft. Type: Trimetrogon, F32 camera only	USN, Mission-S 2b. Sortie 005. Run 4. TMA-1160.	2/22/63	Prints & film, 9 x 9 in.	GS
261.	Crozier, Cape 77 24 S 169 00 E 77 30 S 169 45 E Total: 11 Focal length: 6 in. Alt.: 5,000 ft. Type: Trimetrogon, F32 camera only	USN, Mission-S 2b. Sortie 005. Run 5. TMA-1161.	2/22/63	Prints & film, 9 x 9 in.	GS
262.	Crozier, Cape 77 25 S 169 00 E 77 30 S 169 45 E Total: 15 Focal length: 6 in. Alt.: 5,000 ft. Type: Trimetrogon, F32 camera only	USN, Mission-S 2b. Sortie 005. Run 6. TMA-1162.	2/22/63	Prints & film, 9 x 9 in.	GS
263.	Crozier, Cape 77 29 S 164 34 E Total: 8 Focal length: 8.25 in. Type: Hand held oblique	USN, Mission Cape Crozier Reconnais- sance. TMA-1163.	2/23/63	Prints & film, 7 x 7 in.	GS
264.	Crozier, Cape 77 25 S 169 00 E 77 30 S 169 45 E Total: 10 Focal length: 6 in. Alt.: 5,000 ft.	USN, Mission-S 2b. Sortie 004. Run 1. TMA-1164.	2/22/63	Prints & film, 9 x 9 in.	GS

PHOTOGRAPHY - (Cont.)

	PHOTOGRAPHY	ORGANIZATION & SORTIE NOS.	DATE	REMARKS	HOLDING ORGANIZATION
265.	Crozier, Cape 77 25 S 169 00 E 77 30 S 169 45 E Total: 14 Focal length: 6 in. Alt.: 5,000 ft. Type: Trimetrogon, F32 camera only	USN, Mission-S 2b. Sortie 004. Run 2. TMA-1165.	2/22/63	Prints & film, 9 x 9 in.	GS
266.	Crozier, Cape 77 25 S 169 00 E 77 30 S 169 45 E Total: 18 Focal length: 6 in. Alt.: 5,000 ft. Type: Trimetrogon, F32 camera only	USN, Mission-S 2b. Sortie 005. Run 3. TMA-1166.	2/22/63	Prints & film, 9 x 9 in.	GS
267.	Crozier, Cape 77 25 S 169 00 E 77 30 S 169 45 E Total: 16 Focal length: 6 in. Alt.: 3,000 ft. Type: Trimetrogon, F32 camera only	USN, Mission-S 2b. Sortie 004. Run 4. TMA-1167.	2/22/63	Prints & film, 9 x 9 in.	GS
268.	Crozier, Cape 77 25 S 169 00 E 77 30 S 169 45 E Total: 28 Focal length: 6 in. Alt.: 3,000 ft. Type: Trimetrogon	USN, Mission-S 2b. Sortie 004. Run 5. TMA-1168.	2/22/63	Prints & film, 9 x 9 in.	GS
269.	Crozier, Cape 77 25 S 169 00 E 77 30 S 169 45 E Total: 31 Focal length: 6 in. Alt.: 5,000 ft. Type: Trimetrogon, F32 camera only	USN, Mission-S 2b. Sortie 004. Run 6. TMA-1169.	2/22/63	Prints & film, 9 x 9 in.	GS

PHOTOGRAPHY - (Cont.)

	PHOTOGRAPHY	ORGANIZATION & SORTIE NOS.	DATE	REMARKS	HOLDING ORGANIZATIO
270.	Crozier, Cape 77 24 S 169 25 E 77 34 S 170 00 E Total: 14 Focal length: 12 in. Alt.: 5,000 ft. Type: Vertical	USN, Mission-S 2b. Sortie 002. Run 1. TMA-1103.	1/11/63	Prints & film, 9 x 9 in.	GS
271.	Crozier, Cape 77 24 S 169 25 E 77 34 S 170 00 E Total: 9 Focal length: 12 in. Alt.: 5,000 ft. Type: Vertical	USN, Mission-S 2b. Sortie 002. Run 2. TMA-1104.	1/11/63	Prints & film, 9 x 9 in.	GS
272.	Crozier, Cape 77 24 S 169 25 E 77 34 S 170 00 E Total: 15 Focal length: 12 in. Alt.: 5,000 ft. Type: Vertical	USN, Mission-S 2b. Sortie 002. Run 3. TMA-1105.	1/11/63	Prints & film, 9 x 9 in.	GS
273.	Crozier, Cape 77 24 S 169 25 E 77 34 S 170 00 E Total: 15 Focal length: 12 in. Alt.: 4,000 ft. Type: Vertical	USN, Mission-S 2b. Sortie 002. Run 4. TMA-1106.	1/11/63	Prints & film, 9 x 9 in.	GS
274.	Crozier, Cape 77 24 S 169 45 E 77 30 S 169 45 E Total: 11 Focal length: 6 in. Alt.: 5,000 ft. Type: Trimetrogon, F32 camera only	USN, Mission-S 2b. Sortie 003. Run 4. TMA-1102.	1/28/63	9 x 9 in.	GS

PHOTOGRAPHY - (Cont.)

	PHOTOGRAPHY	ORGANIZATION & SORTIE NOS.	DATE	REMARKS	HOLDING ORGANIZATION
275.	Crozier, Cape 77 24 S 169 45 E 77 30 S 169 45 E Total: 9 Focal length: 6 in. Alt.: 5,000 ft. Type: Trimetrogon, F32 camera only	USN, Mission-S 2b. Sortie 003. Run 3. TMA-1101.	1/28/63	Prints & film, 9 x 9 in.	GS
276.	Crozier, Cape 77 24 S 169 45 E 77 30 S 169 45 E Total: 15 Focal length: 6 in. Alt.: 3,000 ft. Type: Trimetrogon, F32 camera only	USN, Mission-S 2b. Sortie 003. Run 2. TMA-1100.	1/28/63	Prints & film, 9 x 9 in.	GS
277.	Crozier, Cape 77 24 S 169 45 E 77 30 S 169 45 E Total: 13 Focal length: 6 in. Alt.: 3,000 ft. Type: Trimetrogon, F32 camera only	USN, Mission-S 2b. Sortie 003. Run 1. TMA-1099.	1/28/63	Prints & film, 9 x 9 in.	GS
278.	Crozier, Cape 77 29 S 164 34 E Total: 14 sets Focal length: 6 in. Alt.: 5,000 ft. Type: Trimetrogon	USN, Mission-S 2b. Sortie 001. Run 1. TMA-1089.	11/2/62	Prints & film, 9 x 9 in.	GS
279.	Crozier, Cape 77 29 S 164 34 E Total: 11 sets Focal length: 6 in. Alt.: 5,000 ft. Type: Trimetrogon	USN, Mission-S 2b. Sortie 001. Run 2. TMA-1090.	11/2/62	Prints & film, 9 x 9 in.	GS

	PHOTOGRAPHY	ORGANIZATION & SORTIE NOS.	DATE	REMARKS	HOLDING ORGANIZATION
280.	Crozier, Cape 77 29 S 164 34 E Total: 112 sets Focal length: 6 in. Alt.: 1,000 ft. Type: Trimetrogon	USN, Mission-S 2b. Sortie 001. Run 3. TMA-1091.	11/2/62	Prints & film, 9 x 9 in.	GS
281.	Crozier, Cape 77 29 S 164 34 E Total: 59 sets Focal length: 6 in. Alt.: 1,500 ft. Type: Trimetrogon	USN, Mission-S 2b. Sortie 001. Run 4. TMA-1092.	11/2/62	Prints & film, 9 x 9 in.	GS
282.	Crozier, Cape 77 29 S 164 34 E Total: 92 sets Focal length: 6 in. Alt.: 1,500 ft. Type: Trimetrogon	USN, Mission-S 2b. Sortie 001. Run 5. TMA-1093.	11/2/63	Prints & film, 9 x 9 in.	GS
283.	Dailey Island 77 53 S 164 50 E 77 53 S 165 20 E Total: 18 Focal length: 6 in. Alt.: 6,300 ft. Type: Color	USN, Mission-S 8, 13, 14, 15. Run 5. Roll 1.	11/22/62	Film only, 9 x 9 in.	GS
284.	Dundee Island 63 30 S 55 55 W Total: 21 Focal length: 8.25 in. Alt.: Low, varying Type: Hand held oblique	USN, Mission 18. Roll 14.	2/20/63	Film only, 7 x 7 in.	GS
285.	Evans, Cape 77 30 S 166 15 E 77 40 S 166 45 E Total: 13 Focal length: 305 mm. Alt.: 5,000 ft. Type: Vertical	USN, Mission 13. Sortie 003. Run 1. TMA-1170.	2/2/63	Prints & film, 9 x 9 in.	GS

PHOTOGRAPHY - (Cont.)

	PHOTOGRAPHY	ORGANIZATION & SORTIE NOS.	DATE	REMARKS	HOLDING ORGANIZATION
286.	Evans, Cape 77 30 S 166 15 E 77 40 S 166 45 E Total: 12 Focal length: 305 mm. Alt.: 5,000 ft. Type: Vertical	USN, Mission-S 13. Sortie 003. Run 2. TMA-1171.	2/2/63	Prints & film, 9 x 9 in.	GS
287.	Evans, Cape and Cape Royds 77 34 S 166 00 E 77 44 S 166 45 E Total: 9 Focal length: 6 in. Alt.: 1,000 ft. Type: Vertical	USN, Mission-S 13. Sortie 002. Run 1. TMA-1115.	12/31/62	Prints & film, 9 x 9 in.	GS
288.	Evans, Cape and Cape Royds 77 34 S 166 00 E 77 44 S 166 45 E Total: 15 Focal length: 6 in. Alt.: 1,500 ft. Type: Vertical	USN, Mission-S 13. Sortie 002. Run 2. TMA-1116.	12/31/62	Prints & film, 9 x 9 in.	GS
289.	Evans, Cape and Cape Royds 77 34 S 166 00 E 77 44 S 166 45 E Total: 12 Focal length: 6 in. Type: Vertical	USN, Mission-S 13. Sortie 002. Run 3. TMA-1117.	12/31/62	Prints & film, 9 x 9 in.	GS
290.	Evans, Cape and Cape Royds 77 34 S 166 00 E 77 44 S 166 45 E Total: 13 Focal length: 6 in. Type: Vertical	USN, Mission-S 13. Sortie 002. Run 4. TMA-1118.	12/31/62	Prints & film, 9 x 9 in.	GS

	PHOTOGRAPHY	ORGANIZATION & SORTIE NOS.	DATE	REMARKS	HOLDING ORGANIZATION
291.	Evans, Cape and Cape Royds 77 34 S 166 00 E 77 44 S 166 45 E Total: 7 Focal length: 6 in. Type: Vertical	USN, Mission-S 13. Sortie 002. Run 5. TMA-1119.	12/31/62	Prints & film, 9 x 9 in.	GS
292.	Evans, Cape 77 30 S 166 15 E 77 40 S 166 45 E Total: 15 Focal length: 305 mm. Alt.: 5,000 ft. Type: Vertical	USN, Mission-S 13. Sortie 003. Run 3. TMA-1172.	2/2/63	Prints & film, 9 x 9 in.	GS
293.	Graham Land 64 26 S 61 00 W Total: 41 Focal length: 8.25 in. Alt.: Low, varying Type: Hand held oblique	USN, Mission 19. Roll 15.	2/24/63	Film only, 7 x 7 in.	GS
294.	Graham Land 65 20 S 64 05 W Total: 9 Focal length: 8.25 in. Alt.: Low, varying Type: Hand held oblique	USN, Mission 5. Roll 4.	1/28/63	Film only, 7 x 7 in.	GS
295.	Graham Land 64 35 S 62 30 W 64 50 S 62 35 W Total: 34 Focal length: 8.25 in. Alt.: Low, varying Type: Hand held oblique	USN, Mission 7. Roll 6.	2/5/63	Film only, 7 x 7 in.	GS

PHOTOGRAPHY - (Cont.)

	PHOTOGRAPHY	ORGANIZATION & SORTIE NOS.	DATE	REMARKS	HOLDING ORGANIZATION
296.	Graham Land 64 50 S 62 50 W 65 15 S 64 10 W Total: 21 Focal length: 8.25 in. Alt.: Low, varying Type: Hand held oblique	USN, Mission 6. Roll 5.	1/28/63 2/2/63	Film only, 7 x 7 in.	GS
297.	Graham Land 64 40 S 62 30 W Total: 31 Focal length: 8.25 in. Alt.: Low, varying Type: Hand held oblique	USN, Mission 8. Roll 7.	2/5/63	Film only, 7 x 7 in.	GS
298.	Graham Land 64 14 S 61 35 W 64 30 S 61 55 W Total: 73 Focal length: 8.25 in. Alt.: Low, varying Type: Hand held oblique	USN, Mission 10. Roll 9.	2/9/63	Film only, 7 x 7 in.	GS
299.	Graham Land 64 10 S 61 05 W Total: 65 Focal length: 8.25 in. Alt.: Low, varying Type: Hand held oblique	USN, Mission 11. Roll 10.	2/10/63	Film only, 7 x 7 in.	GS
300.	Graham Land 65 20 S 59 00 W Total: 18 Focal length: 8.25 in. Alt.: Low, varying Type: Hand held oblique	USN, Mission 17. Roll 14.	2/19/63	Film only, 7 x 7 in.	GS

PHOTOGRAPHY - (Cont.)

	PHOTOGRAPHY	ORGANIZATION & SORTIE NOS.	DATE	REMARKS	HOLDING ORGANIZATIO
301.	Greenwich Island 62 30 S 63 18 W Total: 65 Focal length: 8.25 in. Alt.: Low, varying Type: Hand held oblique	USN, Mission 22. Roll 17.	Deep Freeze 1963	Film only, 7 x 7 in.	GS
302.	Heritage Range 78 46 S 88 45 W 80 40 S 79 30 W Total: 89 sets Focal length: 6 in. Alt.: 25,000 ft. Type: Trimetrogon	USN, Mission-B lb. Sortie 003. Run 3. TMA-1075.	11/27/62	Prints & film, 9 x 9 in.	GS
303.	Heritage Range 80 31 S 79 00 W 78 40 S 87 30 W Total: 84 sets Focal length: 6 in. Alt.: 25,000 ft. Type: Trimetrogon	USN, Mission-B lb. Sortie 003. Run 2. TMA-1074.	11/27/62	Prints & film, 9 x 9 in.	GS
304.	Heritage Range 78 30 S 86 50 W 80 16 S 78 35 W Total: 95 sets Focal length: 6 in. Alt.: 25,000 ft. Type: Trimetrogon	USN, Mission-B lb. Sortie 003. Run 1. TMA-1073.	11/27/62	Prints & film, 9 x 9 in.	GS
305.	Heritage Range 78 32 S 86 22 W 80 28 S 77 30 W Total: 95 sets Focal length: 6 in. Alt.: 25,000 ft. Type: Trimetrogon	USN, Mission-B lb. Sortie 002. Run 1. TMA-1033.	11/11/62	Prints & film, 9 x 9 in.	GS

PHOTOGRAPHY - (Cont.)

	PHOTOGRAPHY	ORGANIZATION & SORTIE NOS.	DATE	REMARKS	HOLDING ORGANIZATION
306.	Heritage Range 80 26 S 79 00 W 78 42 S 87 05 W Total: 108 sets Focal length: 6 in. Alt.: 25,000 ft. Type: Trimetrogon	USN, Mission-B 1b. Sortie 002. Run 2. TMA-1034.	11/11/62	Prints & film, 9 x 9 in.	GS
307.	James Ross Island 64 10 S 57 40 W Total: 66 Focal length: 8.25 in. Alt.: Low, varying Type: Hand held oblique	USN, Mission-16. Roll 14.	2/17/63	Film only, 7 x 7 in.	GS
308.	Livingston Island 62 44 S 60 18 W 62 42 S 60 50 W Total: 104 Focal length: 8.25 in. Alt.: Low, varying Type: Hand held oblique	USN, Mission-21. Roll 16.	Deep Freeze 1963	Film only, 7 x 7 in.	GS
309.	Louis Philippe Peninsula, United Kingdom Base "D" 63 24 S 56 59 W Total: 42 Focal length: 8.25 in. Alt.: Low, varying Type: Hand held oblique	USN, Mission-14. Roll 13.	2/14/63	Film only, 7 x 7 in.	GS
310.	Marble Point 77 26 S 163 48 E Total: 14 Focal length: 12 in. Alt.: 5,000 ft. Type: Vertical	USN, Mission-S 19. Sortie 001. Run 1. TMA-1109.	1/1/63	Prints & film, 9 x 9 in.	GS

PHOTOGRAPHY - (Cont.)

	PHOTOGRAPHY	ORGANIZATION & SORTIE NOS.	DATE	REMARKS	HOLDING ORGANIZATIO
311.	Marble Point 77 26 S 163 48 E Total: 15 Focal length: 12 in. Alt.: 5,000 ft. Type: Vertical	USN, Mission-S 19. Sortie 001. Run 2. TMA-1110.	1/1/63	Prints & film, 9 x 9 in.	GS
312.	Marble Point 77 26 S 163 48 E Total: 17 Focal length: 12 in. Alt.: 5,000 ft. Type: Vertical	USN, Mission-S 19. Sortie 001. Run 3. TMA-1111.	1/1/63	Prints & film, 9 x 9 in.	GS
313.	Marble Point 77 26 S 163 48 E Total: 27 Focal length: 12 in. Alt.: 5,000 ft. Type: Vertical	USN, Mission-S 19. Sortie 001. Run 4. TMA-1112.	1/1/63	Prints & film, 9 x 9 in.	GS
314.	Marble Point 77 26 S 163 48 E Total: 15 Focal length: 12 in. Alt.: 5,000 ft. Type: Vertical	USN, Mission-S 19. Sortie 001. Run 5. TMA-1113.	1/1/63	Prints & film, 9 x 9 in.	GS
315.	Marble Point 77 26 S 163 48 E Total: 9 Focal length: 12 in. Type: Vertical	USN, Mission-S 19. Sortie 001. Run 6. TMA-1114.	1/1/63	Prints & film, 9 x 9 in.	GS
316.	Marie Byrd Land 80 00 S 119 31 W 82 55 S 103 30 W Total: 174 Focal length: 6 in. Alt.: 25,000 ft. Type: Vertical	USN, Mission-S 7. Sortie 004. Run 1. TMA-1140.	2/8/63	Prints & film, 9 x 9 in.	GS

PHOTOGRAPHY - (Cont.)

	PHOTOGRAPHY	ORGANIZATION & SORTIE NOS.	DATE	REMARKS	HOLDING ORGANIZATION
317.	Marie Byrd Land 82 55 S 103 30 W 80 00 S 119 31 W Total: 310 Focal length: 6 in. Alt.: 15,000 ft. Type: Vertical	USN, Mission-S 7. Sortie 005. Run 1. TMA-1141.	2/8/63	Prints & film, 9 x 9 in.	GS
318.	Marie Byrd Land 82 55 S 103 30 W 80 00 S 119 31 W Total: 128 Focal length: 6 in. Alt.: 25,000 ft. Type: Vertical	USN, Mission-S 7. Sortie 004. Run 1. TMA-1139.	2/8/63	Prints & film, 9 x 9 in.	GS
319.	Marie Byrd Land 80 00 S 119 31 W 82 55 S 103 30 W Total: 308 Focal length: 6 in. Alt.: 15,000 ft. Type: Vertical	USN, Mission-S 7. Sortie 003. Run 1. TMA-1136.	2/8/63	Prints & film, 9 x 9 in.	GS
320.	Marie Byrd Land 80 00 S 119 31 W 82 55 S 103 30 W Total: 41 Focal length: 6 in. Alt.: 16,000 ft. Type: Vertical	USN, Mission-S 7. Sortie 001. Run 1. TMA-1144.	2/1/63	Prints & film, 9 x 9 in.	GS
321.	McMurdo Station 77 44 S 166 27 E 77 55 S 166 56 E Total: 23 Focal length: 6 in. Alt.: 5,000 ft. Type: Vertical	USN, Mission-S 16. Sortie 001. Run 2. TMA-1122.	12/31/62	Prints & film, 9 x 9 in.	GS

PHOTOGRAPHY - (Cont.)

	PHOTOGRAPHY	ORGANIZATION & SORTIE NOS.	DATE	REMARKS	HOLDING ORGANIZATIO
322.	McMurdo Station 77 44 S 166 27 E 77 55 S 166 56 E Total: 18 Focal length: 6 in. Alt.: 5,000 ft. Type: Vertical	USN, Mission-S 16. Sortie 001. Run 3. TMA-1123.	12/31/62	Prints & film, 9 x 9 in.	GS
323.	McMurdo Station 77 44 S 166 27 E 77 55 S 166 56 E Total: 29 Focal length: 6 in. Alt.: 5,000 ft. Type: Vertical	USN, Mission-S 16. Sortie 001. Run 4. TMA-1124.	12/31/62	Prints & film, 9 x 9 in.	GS
324.	McMurdo Station 77 44 S 166 27 E 77 55 S 166 56 E Total: 25 Focal length: 6 in. Alt.: 5,000 ft. Type: Vertical	USN, Mission-S 16. Sortie 001. Run 5. TMA-1125.	12/31/62	Prints & film, 9 x 9 in.	GS
325.	McMurdo Station 77 44 S 166 27 E 77 55 S 166 56 E Total: 28 Focal length: 6 in. Alt.: 5,000 ft. Type: Vertical	USN, Mission-S 16. Sortie 001. Run 6. TMA-1126.	12/31/62	Prints & film, 9 x 9 in.	GS
326.	McMurdo Station 77 44 S 166 27 E 77 55 S 166 56 E Total: 13 Focal length: 6 in. Alt.: 5,000 ft. Type: Vertical	USN, Mission-S 16. Sortie 001. Run 7. TMA-1127.	12/31/62	Prints & film, 9 x 9 in.	GS

PHOTOGRAPHY - (Cont.)

	PHOTOGRAPHY	ORGANIZATION & SORTIE NOS.	DATE	REMARKS	HOLDING ORGANIZATION
327.	McMurdo Station 77 44 S 166 27 E 77 55 S 166 56 E Total: 21 Focal length: 6 in. Alt.: 5,000 ft. Type: Vertical	USN, Mission-S 16. Sortie 001. Run 8. TMA-1128.	12/31/62	Prints & film, 9 x 9 in.	GS
328.	McMurdo Station 77 44 S 166 27 E 77 55 S 166 56 E Total: 14 Focal length: 6 in. Alt.: 5,000 ft. Type: Vertical	USN, Mission-S 16. Sortie 001. Run 9. TMA-1129.	12/31/62	Prints & film, 9 x 9 in.	GS
329.	McMurdo Station 77 44 S 166 27 E 77 55 S 166 56 E Total: 21 Focal length: 6 in. Alt.: 5,000 ft. Type: Vertical	USN, Mission-S 16. Sortie 001. Run 10. TMA-1130.	12/31/62	Prints & film, 9 x 9 in.	GS
330.	McMurdo Station 77 44 S 166 27 E 77 55 S 166 56 E Total: 13 Focal length: 6 in. Alt.: 5,000 ft. Type: Vertical	USN, Mission-S 16. Sortie 001. Run 11. TMA-1131.	12/31/62	Prints & film, 9 x 9 in.	GS
331.	McMurdo Station 77 32 S 166 15 E 77 54 S 167 00 E Total: 7 Focal length: 6 in. Alt.: 5,000 ft. Type: Trimetrogon, F32 camera only	USN, Mission-R 1. Sortie 001 Run 4. TMA-1097.	10/9/62	Prints & film, 9 x 9 in.	GS

PHOTOGRAPHY - (Cont.)

	PHOTOGRAPHY	ORGANIZATION & SORTIE NOS.	DATE	REMARKS	HOLDING ORGANIZATIO
332.	McMurdo Station 77 32 S 166 15 E 77 54 S 167 00 E Total: 4 Focal length: 6 in. Alt.: 5,000 ft. Type: Trimetrogon, F32 camera only	USN, Mission-R 1. Sortie 001. Run 3. TMA-1096.	10/9/62	Prints & film, 9 x 9 in.	GS
333.	McMurdo Station 77 32 S 166 15 E 77 54 S 167 00 E Total: 11 Focal length: 6 in. Alt.: 5,000 ft. Type: Trimetrogon, F32 camera only	USN, Mission-R 1. Sortie 001. Run 2. TMA-1095.	10/9/62	Prints & film, 9 x 9 in.	GS
334.	McMurdo Station 77 32 S 166 15 E 77 54 S 167 00 E Total: 17 Focal length: 6 in. Alt.: 5,000 ft. Type: Trimetrogon, F32 camera only	USN, Mission-R 1. Sortie 001. Run 1. TMA-1094.	10/9/62	Prints & film, 9 x 9 in.	GS
335.	McMurdo Sound 77 00 S 165 00 E 77 30 S 165 00 E Total: 46 Focal length: 6 in. Alt.: 8,900 ft. Type: Vertical	USN, Mission-S 5e. Sortie 006. Run 1. TMA-1047.	11/15/62	Film only, 9 x 9 in.	GS
336.	McMurdo Sound 77 00 S 165 00 E 77 30 S 165 00 E Total: 79 Focal length: 6 in. Alt.: 6,100 ft. Type: Vertical	USN, Mission-S 5e. Sortie 006. Run 2. TMA-1048.	11/15/62	Film only, 9 x 9 in.	GS

PHOTOGRAPHY - (Cont.)

	PHOTOGRAPHY	ORGANIZATION & SORITE NOS.	DATE	REMARKS	HOLDING ORGANIZATION
337.	McMurdo Sound 77 00 S 165 00 E 77 30 S 165 00 E Total: 79 Focal length: 6 in. Alt.: 3,570 ft. Type: Vertical	USN, Mission-S 5e. Sortie 006. Run 3. TMA-1049.	11/15/62	Film only, 9 x 9 in.	GS
338.	McMurdo Sound 77 00 S 165 00 E 77 30 S 165 00 E Total: 66 Focal length: 6 in. Type: Vertical	USN, Mission-S 5e. Sortie 006. Run 4. TMA-1050.	11/15/62	Film only, 9 x 9 in.	GS
339.	McMurdo Station 77 44 S 166 27 E 77 55 S 166 56 E Total: 17 Focal length: 6 in. Alt.: 5,000 ft. Type: Vertical	USN, Mission-S 16. Sortie 001. Run 1. TMA-1121.	12/31/62	Prints & film, 9 x 9 in.	GS
340.	McMurdo Station 77 51 S 166 40 E Total: 6 Focal length: 6 in. Alt.: 6,200 ft. Type: Color	USN, Mission-S 8. 13, 14, 15. Run 1. Roll 1.	11/22/62	Film only, 9 x 9 in.	GS
341.	McMurdo Station, Vicinity 77 32 S 166 15 E 77 54 S 167 00 E Total: 84 Focal length: 305 mm. Type: Hand held oblique	USN, Mission-R 1. Sortie 002. Runs 1-5 TMA-1120.	12/31/62	Prints & film, 9 x 9 in.	GS

PHOTOGRAPHY - (Cont.)

	PHOTOGRAPHY	ORGANIZATION & SORTIE NOS.	DATE	REMARKS	HOLDING ORGANIZATION
342.	Minna Bluff 78 42 S 167 00 E 78 32 S 165 30 E Total: 37 sets Focal length: 6 in. Alt.: 10,000 ft. Type: Trimetrogon	USN, Mission-S 11. Sortie 001. Run 1. TMA-1044.	11/2/62	Prints & film, 9 x 9 in.	GS
343.	Minna Bluff 78 30 S 165 50 E 78 40 S 167 30 E Total: 25 sets Focal length: 6 in. Alt.: 10,000 ft. Type: Trimetrogon	USN, Mission-S 11. Sortie 001. Run 2. TMA-1045.	11/2/62	Prints & film, 9 x 9 in.	GS
344.	Minna Bluff 78 40 S 167 30 E 78 28 S 165 45 E Total: 54 sets Focal length: 6 in. Alt.: 10,000 ft. Type: Trimetrogon	USN, Mission-S 11. Sortie 001. Run 3. TMA-1046.	11/2/62	Prints & film, 9 x 9 in.	GS
345.	Nash Hills, Martin Hills 82 10 S 89 51 W 82 20 S 86 50 W Total: 20 sets Focal length: 6 in. Alt.: 25,000 ft. Type: Trimetrogon	USN, Mission-B 1b. Sortie 001. Run 5. TMA-1032.	11/7/62	Prints & film, 9 x 9 in.	GS
346.	New Williams Field 77 46 S 166 31 E Total: 7 Focal length: 6 in. Alt.: 6,200 ft. Type: Color	USN, Mission-S 8, 13, 14, 15. Run 1. Roll 1.	11/22/62	Film only, 9 x 9 in.	GS

PHOTOGRAPHY - (Cont.)

	PHOTOGRAPHY	ORGANIZATION & SORTIE NOS.	DATE	REMARKS	HOLDING ORGANIZATION
347.	Patuxent Mts. Various areas Total: 31 Focal length: 8.25 in. Type: Hand held	USN, Mission-R 2. Sortie 001. Run 1. TMA-1098.	11/7/62	Prints & film, 9 x 9 in.	GS
348.	Pirrit Hills 81 14 S 85 50 W 82 16 S 90 00 W Total: 37 sets Focal length: 6 in. Alt.: 25,000 ft. Type: Trimetrogon	USN, Mission-B 1b. Sortie 001. Run 4. TMA-1031.	11/7/62	Prints & film, 9 x 9 in.	GS
349.	Queen Alexandra Range 83 14 S 167 30 E 85 30 S 160 30 E Total: 121 sets Focal length: 6 in. Alt.: 20,000 ft. Type: Trimetrogon	USN, Mission-M 2. Sortie 003. Run 1. TMA-996.	9/11/62	Prints & film, 9 x 9 in.	GS
350.	Queen Alexandra Range 83 10 S 168 30 E 84 00 S 166 30 E Total: 51 sets Focal length: 6 in. Alt.: 20,000 ft. Type: Trimetrogon	USN, Mission-M 2. Sortie 001. Run 1. TMA-997.	11/4/62	Prints & film, 9 x 9 in.	GS
351.	Queen Alexandra Range 83 15 S 156 00 E 82 50 S 157 15 E Total: 25 sets Focal length: 6 in. Alt.: 20,000 ft. Type: Trimetrogon	USN, Mission-M 2. Sortie 002. Run 4. TMA-998.	11/6/62	Prints & film, 9 x 9 in.	GS

PHOTOGRAPHY - (Cont.)

	PHOTOGRAPHY	ORGANIZATION & SORTIE NOS.	DATE	REMARKS	HOLDING ORGANIZATION
352.	Queen Alexandra Range 85 08 S 165 30 E 83 16 S 158 45 E Total: 77 sets Focal length: 6 in. Alt.: 20,000 ft. Type: Trimetrogon	USN, Mission-M 2. Sortie 004. Run 2. TMA-999.	11/9/62	Prints & film, 9 x 9 in.	GS
353.	Queen Alexandra Range 83 08 S 161 30 E 83 46 S 157 00 E Total: 47 Sets Focal length: 6 in. Alt.: 20,000 ft. Type: Trimetrogon	USN, Mission-M 2. Sortie 004. Run 3. TMA-1000.	11/9/62	Prints & film, 9 x 9 in.	GS
354.	Queen Alexandra Range 85 08 S 165 30 E 83 16 S 158 30 E Total: 32 sets Focal length: 6 in. Alt.: 20,000 ft. Type: Trimetrogon	USN, Mission-M 2. Sortie 004. Run 4. TMA-1001.	11/9/62	Prints & film, 9 x 9 in.	GS
355.	Queen Maud Land 84 30 S 177 25 W 85 49 S 176 30 W Total: 90 sets Focal length: 6 in. Alt.: 15,000 ft. Type: Trimetrogon, F32 61-90 missing	USN, Mission-S 1a. Sortie 001. Run 1. TMA-1004.	11/12/62	Prints & film, 9 x 9 in.	GS
356.	Queen Maud Land 87 00 S 152 30 W 85 21 S 150 25 W Total: 112 sets Focal length: 6 in. Alt.: 15,000 ft. Type: Trimetrogon, F32 missing	USN, Mission-S 1b. Sortie 001. Run 3. TMA-1005.	11/12/62	Prints & film, 9 x 9 in.	GS

PHOTOGRAPHY - (Cont.)

	PHOTOGRAPHY	ORGANIZATION & SORTIE NOS.	DATE	REMARKS	HOLDING ORGANIZATION
357.	Queen Maud Land 85 41 S 173 10 W 84 31 S 172 20 W Total: 62 sets Focal length: 6 in. Alt.: 15,000 ft. Type: Trimetrogon, F31 & F33 camera only	USN, Mission-S 1a. Sortie 001. Run 2. TMA-1006.	11/12/62	Prints & film, 9 x 9 in.	GS
358.	Queen Maud Range 83 30 S 169 45 E 85 34 S 144 00 W Total: 172 sets Focal length: 6 in. Alt.: 20,000 ft. Type: Trimetrogon, F31 & F33 camera only	USN, Mission-M 3. Sortie 001. Run 1. TMA-1009.	11/13/62	Prints & film, 9 x 9 in.	GS
359.	Queen Maud Range 85 48 S 139 00 W 85 36 S 160 30 W Total: 50 sets Focal length: 6 in. Alt.: 25,000 ft. Type: Trimetrogon, F31 & F33 camera only	USN, Mission-M 3. Sortie 001. Run 2. TMA-1010.	11/13/62	Prints & film, 9 x 9 in.	GS
360.	Queen Maud Range 86 40 S 139 30 W 85 20 S 170 00 E Total: 168 sets Focal length: 6 in. Alt.: 25,000 ft.	USN, Mission-M 3. Sortie 004. Run 4. TMA-1156.	2/16/63	Prints & film, 9 x 9 in.	GS
361.	Queen Maud Range 84 00 S 174 00 E 84 34 S 167 30 W Total: 99 sets Focal length: 6 in. Alt.: 20,000 ft. Type: Trimetrogon	USN, Mission-M 3. Sortie 002. Run 1. TMA-1132.	2/4/63	Prints & film, 9 x 9 in.	GS

PHOTOGRAPHY - (Cont.)

	PHOTOGRAPHY	ORGANIZATION & SORTIE NOS.	DATE	REMARKS	HOLDING ORGANIZATI
362.	Queen Maud Range 84 33 S 176 00 W 85 25 S 145 30 W Total: 118 sets Focal length: 6 in. Alt.: 20,000 ft. Type: Trimetrogon	USN, Mission-M 3. Sortie 002. Run 1a. TMA-1133.	2/4/63	Prints & film, 9 x 9 in.	GS
363.	Queen Maud Range 85 36 S 124 30 W 86 34 S 130 00 W Total: 69 sets Focal length: 6 in. Alt.: 25,000 ft. Type: Trimetrogon	USN, Mission-M 3. Sortie 002. Run 8. TMA-1134.	2/4/63	Prints & film, 9 x 9 in.	GS
364.	Queen Maud Range 86 22 S 123 00 W 85 13 S 168 30 E Total: 247 sets Focal length: 6 in. Alt.: 25,000 ft. Type: Trimetrogon	USN, Mission-M 3. Sortie 003. Run 4. TMA-1135.	2/4/63	Prints & film, 9 x 9 in.	GS
365.	Ruppert-Hobbs Coast 76 35 S 146 45 W 74 45 S 132 30 W Total: 180 sets Focal length: 6 in. Alt.: 20,000 ft. Type: Trimetrogon	USN, Mission-B 2. Sortie 001. Run 1. TMA-990.	10/29/62	Prints & film, 9 x 9 in.	GS
366.	Ross Island 77 43 S 168 05 E 78 02 S 164 20 E Total: 26 Focal length: 6 in. Alt.: 19,000 ft. Type: Trimetrogon, F33 camera only	USN, Mission-S 12. Sortie 001. Run 2. TMA-1041.	11/18/62	Prints & film, 9 x 9 in.	GS

PHOTOGRAPHY - (Cont.)

	PHOTOGRAPHY	ORGANIZATION & SORTIE NOS.	DATE	REMARKS	HOLDING ORGANIZATION
367.	Ross Island and vicinity 77 25 S 168 42 E 77 38 S 172 00 E Total: 32 Focal length: 6 in. Alt.: 15,000 ft. Type: Trimetrogon; F32 & F33 cameras only	USN, Mission-S 12. Sortie 001. Run 7. TMA-1038.	11/18/62	Prints & film, 9 x 9 in.	GS
368.	Ross Island 77 27 S 169 50 E 78 03 S 165 10 E Total: 92 Focal length: 6 in. Alt.: 15,000 ft. Type: Trimetrogon; F33-64 prints, F32-28 prints	USN, Mission-S 12. Sortie 001. Run 6. TMA-1039.	11/18/62	Prints & film, 9 x 9 in.	GS
369.	Ross Island 77 40 S 164 00 E 77 31 S 167 20 E Total: 36 Focal length: 6 in. Alt.: 18,500 ft. Type: Trimetrogon; F33 camera only	USN, Mission-S 12. Sortie 001. Run 3. TMA-1040.	11/18/62	Prints & film, 9 x 9 in.	GS
370.	Ross Sea 77 54 S 174 30 E 77 48 S 179 00 E Total: 120 Focal length: 6 in. Alt.: 8,600 ft. Type: Vertical	USN, Mission-S 5a. Sortie 009. Run 1. TMA-1057.	11/18/62	Film only, 9 x 9 in.	GS

PHOTOGRAPHY- (Cont.)

	PHOTOGRAPHY	ORGANIZATION & SORTIE NOS.	DATE	REMARKS	HOLDING ORGANIZATI
371.	Ross Sea 78 30 S 171 30 W 78 40 S 173 10 W Total: 42 Focal length: 6 in. Alt.: 8,600 ft. Type: Vertical	USN, Mission-S 5a. Sortie 009. Run 2. TMA-1058.	11/18/62	Film only, 9 x 9 in.	GS
372.	Ross Sea 76 28 S 179 30 W 77 24 S 174 30 E Total: 140 Focal length: 6 in. Alt.: 8,700 ft. Type: Vertical	USN, Mission-S 5a. Sortie 009. Run 3. TMA-1059.	11/18/62	Film only, 9 x 9 in.	GS
373.	Ross Sea 77 35 S 175 10 E 77 30 S 173 45 E Total: 26 Focal length: 6 in. Alt.: 8,700 ft. Type: Vertical	USN, Mission-S 5a. Sortie 009. Run 4. TMA-1060.	11/18/62	Film only, 9 x 9 in.	GS
374.	Ross Sea 73 56 S 173 50 E 73 40 S 175 40 E Total: 36 Focal length: 6 in. Alt.: 9,000 ft.	USN, Mission-S 5. Sortie 010. Run 1. TMA-1061.	11/20/62	Film only, 9 x 9 in.	GS
375.	Ross Sea 73 40 S 175 45 E 72 27 S 175 15 E Total: 101 Focal length: 6 in. Alt.: 9,000 ft.	USN, Mission-S 5e. Sortie 010. Run 2. TMA-1062.	11/20/62	Film only, 9 x 9 in.	GS

PHOTOGRAPHY - (Cont.)

	PHOTOGRAPHY	ORGANIZATION & SORTIE NOS.	DATE	REMARKS	HOLDING ORGANIZATION
376.	Ross Sea 73 10 S 174 30 E 75 07 S 175 35 E Total: 162 Focal length: 6 in. Alt.: 8,950 ft. Type: Vertical	USN, Mission-S 5e. Sortie 010. Run 3. TMA-1063.	11/20/62	Film only, 9 x 9 in.	GS
377.	Ross Sea 75 17 S 175 10 E 76 17 S 172 50 E Total: 89 Focal length: 6 in. Alt.: 8,950 ft.	USN, Mission-S 5e. Sortie 010. Run 4. TMA-1064.	11/20/62	Film only, 9 x 9 in.	GS
378.	Ross Sea 73 52 S 174 30 E 72 48 S 176 00 E Total: 50 Focal length: 6 in. Alt.: 9,250 ft. Type: Vertical	USN, Mission-S 5e. Sortie 001. Run 1. TMA-1080.	10/25/62	Film only, 9 x 9 in.	GS
379.	Ross Sea 71 47 S 176 04 E 71 52 S 173 35 E Total: 32 Focal length: 6 in. Alt.: 9,000 ft. Type: Vertical	USN, Mission-S 5e. Sortie 001. Run 2. TMA-1081.	10/25/62	Film only, 9 x 9 in.	GS
380.	Ross Sea Total: 35 Focal length: 6 in. Alt.: 1,900 ft. Type: Vertical	USN, Mission-S 5e. Sortie 001. Run 3. TMA-1082.	10/25/62	Film only, 9 x 9 in.	GS
381.	Ross Sea 76 22 S 167 30 E 76 32 S 168 00 E Total: 25 Focal length: 6 in. Alt.: 3,500 ft. Type: Vertical	USN, Mission-S 5e. Sortie 001. Run 4. TMA-1083.	10/25/62		GS

PHOTOGRAPHY - (Cont.)

	PHOTOGRAPHY	ORGANIZATION & SORTIE NOS.	DATE	REMARKS	HOLDING ORGANIZATIO
382.	Ross Sea 70 42 S 176 06 E 71 26 S 176 33 E Total: 215 Focal length: 6 in. Alt.: 8,600 ft. Type: Vertical	USN, Mission-S 5e. Sortie 007. Run 3. TMA-1053.	11/17/62	Film only, 9 x 9 in.	GS
383.	Ross Sea 71 30 S 177 20 E 71 36 S 179 22 E Total: 54 Focal length: 6 in. Alt.: 8,550 ft. Type: Vertical	USN, Mission-S 5e. Sortie 007. Run 4. TMA-1054.	11/17/62	Film only, 9 x 9 in.	GS
384.	Ross Sea 71 38 S 178 55 E 71 50 S 173 30 E Total: 149 Focal length: 6 in. Alt.: 8,500 ft. Type: Vertical	USN, Mission-S 5e. Sortie 008. Run 5. TMA-1055.	11/17/62	Film only, 9 x 9 in.	GS
385.	Ross Sea 72 20 S 170 35 E 72 58 S 170 20 E Total: 42 Focal length: 6 in. Alt.: 5,750 ft. Type: Vertical	USN, Mission-S 5e. Sortie 007. Run 1. TMA-1051.	11/17/62	Film only, 9 x 9 in.	GS
386.	Ross Sea 74 44 S 171 40 E 75 44 S 169 30 E Total: 110 Focal length: 6 in. Alt.: 7,900 ft. Type: Vertical	USN, Mission-S 5e. Sortie 002. Run 1. TMA-1017.	11/9/62	Film only, 9 x 9 in.	GS
387.	Ross Sea 74 27 S 171 30 E 73 47 S 171 00 E Total: 91 Type: Vertical	USN, Mission-S 5e. Sortie 002. Run 2. TMA-1018.	11/9/62	Film only, 9 x 9 in.	GS

PHOTOGRAPHY - (Cont.)

	PHOTOGRAPHY	ORGANIZATION & SORTIE NOS.	DATE	REMARKS	HOLDING ORGANIZATION
388.	Ross Sea 72 26 S 171 20 E 73 22 S 170 28 E Total: 345 Focal length: 6 in. Type: Vertical	USN, Mission-S 5e. Sortie 003. Run 1. TMA-1020.	11/13/62	Film only, 9 x 9 in.	GS
389.	Ross Sea 72 26 S 171 20 E 73 22 S 170 28 E Total: 110 Focal length: 6 in. Alt.: 5,250 ft. Type: Vertical	USN, Mission-S 5e. Sortie 004. Run 1. TMA-1021.	11/13/62	Film only, 9 x 9 in.	GS
390.	Ross Sea 73 00 S 170 50 E 74 00 S 170 37 E Total: 81 Alt.: 8,000 ft. Type: Vertical	USN, Mission-S 5e. Sortie 004. Run 2. TMA-1022.	11/13/62	Film only, 9 x 9 in.	GS
391.	Ross Sea 74 04 S 170 45 E 74 16 S 170 45 E Total: 12 Focal length: 6 in. Type: Vertical	USN, Mission-S 5e. Sortie 004. Run 2a. TMA-1023.	11/13/62	Film only, 9 x 9 in.	GS
392.	Ross Sea 75 25 S 169 30 E 76 02 S 168 27 E Total: 34 Focal length: 6 in. Alt.: 8,000 ft. Type: Vertical	USN, Mission-S 5e. Sortie 004. Run 3. TMA-1024.	11/13/62	Film only, 9 x 9 in.	GS
393.	Ross Sea 75 19 S 169 15 E 75 50 S 169 00 E Total: 57 Focal length: 6 in. Alt.: 5,000 ft. Type: Vertical	USN, Mission-S 5e. Sortie 004. Run 4. TMA-1025.	11/13/62	Film only, 9 x 9 in.	GS

PHOTOGRAPHY - (Cont.)

	PHOTOGRAPHY	ORGANIZATION & SORTIE NOS.	DATE	REMARKS	HOLDING ORGANIZATIO
394.	Ross Sea 75 40 S 168 30 E 76 20 S 168 30 E Total: 109 Focal length: 6 in. Alt.: 2,700 ft. Type: Vertical	USN, Mission-S 5e. Sortie 004. Run 5. TMA-1026.	11/13/62	Film only, 9 x 9 in.	GS
395.	Ross Sea 76 06 S 175 05 E 73 56 S 176 54 E Total: 260 Focal length: 6 in. Alt.: 7,900 ft. Type: Vertical	USN, Mission-S 5e. Sortie 005. Run 1. TMA-1027.	11/14/62	Film only, 9 x 9 in.	GS
396.	Ross Sea 72 54 S 173 15 E 72 27 S 170 45 E Focal length: 6 in. Alt.: 7,850 ft. Type: Vertical	USN, Mission-S 5c. Sortie 005. Run 2. TMA-1028.	11/14/62	Film only, 9 x 9 in.	GS
397.	Royal Society Range 77 32 S 163 30 E 78 40 S 161 45 E Total: 24 Focal length: 6 in. Alt.: 15,000 ft. Type: Color, Trimetrogon	USN, Mission-S 8. Sortie 002. Run 1.	2/9/63	Film only, 9 x 9 in.	GS
398.	Royal Society Range 77 42 S 159 37 E 77 56 S 161 45 E Total: 28 Focal length: 6 in. Alt.: 15,000 ft. Type: Color, Trimetrogon	USN, Mission-S 8. Sortie 002. Run 2.	2/9/63	Film only, 9 x 9 in.	GS

PHOTOGRAPHY - (Cont.)

	PHOTOGRAPHY	ORGANIZATION & SORTIE NOS.	DATE	REMARKS	HOLDING ORGANIZATION
399.	Royal Society Range 77 10 S 162 07 E 77 34 S 161 37 E Total: 16 Focal length: 6 in. Alt.: 15,000 ft. Type: Color, Trimetrogon	USN, Mission-S 8. Sortie 002. Run 3.	2/9/63	Film only, 9 x 9 in.	GS
400.	Royal Society Range 77 09 S 161 30 E 77 42 S 161 05 E Total: 32 Focal length: 6 in. Alt.: 15,000 ft. Type: Color, Trimetrogon	USN, Mission-S 8. Sortie 002. Run 4.	2/9/63	Film only, 9 x 9 in.	GS
401.	Royds, Cape to Cape Evans 77 33 S 166 10 E 77 38 S 166 25 E Total: 15 Focal length: 6 in. Alt.: 6,100 ft. Type: Color	USN, Mission-S 8, 13, 14, 15. Run 1. Roll 1.	11/22/62	Film only, 9 x 9 in.	GS
402.	Scott Base and New Williams Field - Old Williams Field and Hut Point 77 48 S 166 00 E 77 54 S 166 45 E Total: 17 Focal length: 12 in. Alt.: 5,000 ft. Type: Vertical	USN, Mission-S 16. Sortie 002. Run 1. TMA-1107.	11/1/63	Prints & film, 9 x 9 in.	GS

	PHOTOGRAPHY	ORGANIZATION & SORTIE NOS.	DATE	REMARKS	HOLDING ORGANIZATIO
403.	Scott Base and New Williams Field - Old Williams Field and Hut Point 77 48 S 166 00 E 77 54 S 166 45 E Total: 16 Focal length: 12 in. Alt.: 5,000 ft. Type: Vertical	USN, Mission-S 16. Sortie 002. Run 2. TMA-1108.	11/1/63	Prints & film, 9 x 9 in.	GS
404.	Seymour Island 64 17 S 56 45 W Total: 56 Focal length: 8.25 in. Alt.: Low, varying Type: Hand held oblique	USN, Mission-15. Roll 14.	2/16/63	Film only, 7 x 7 in.	GS
405.	South Pacific Ocean 71 41 S 169 47 E 70 24 S 171 10 E Total: 87 Focal length: 6 in. Alt.: 8,600 ft. Type: Vertical	USN, Mission-S 5. Sortie 007. Run 2. TMA-1052.	11/17/62	Film only, 9 x 9 in.	GS
406.	South Shetland Islands 62 32 S 59 59 W Total: 153 Alt.: Low, varying Type: Hand held oblique	USN, Mission-13. Roll 12.	2/2/63	Prints & film, 7 x 7 in.	GS
407.	South Shetland Islands - United Kingdom Base "B" 62 59 S 60 34 W - (Deception Island) Total: 62 Focal length: 8.25 in. Alt.: Low, varying Type: Hand held oblique	USN, Mission-12. Roll 11.	2/12/63	Film only, 7 x 7 in.	GS

PHOTOGRAPHY - (Cont.)

	PHOTOGRAPHY	ORGANIZATION & SORTIE NOS.	DATE	REMARKS	HOLDING ORGANIZATION
408.	South Shetland Islands 62 08 S 58 10 W 62 12 S 58 25 W Total: 38 Focal length: 8.25 in. Alt.: Low, varying Type: Hand held oblique	USN, Mission-25. Roll 19.	3/4/63	Film only, 7 x 7 in.	GS
409.	South Shetland Islands 62 13 S 58 40 W Total: 45 Focal length: 8.25 in. Alt.: Low, varying Type: Hand held oblique	USN, Mission-24. Roll 19.	3/4/63	Film only, 7 x 7 in.	GS
410.	South Shetland Islands 62 10 S 58 50 W 62 20 S 59 00 W Total: 76 Focal length: 8.25 in. Alt.: Low, varying Type: Hand held oblique	USN, Mission-23. Roll 18.	2/28/63 3/4/63	Film only, 7 x 7 in.	GS
411.	Trinity Island 63 45 S 60 45 W Total: 48 Focal length: 8.25 in. Alt.: Low, varying Type: Hand held oblique	USN, Mission-20. Roll 16.	Deep Freeze 1963	Film only, 7 x 7 in.	GS
412.	Victoria Land, Northern 72 44 S 170 00 E 71 19 S 165 40 E Total: 134 Focal length: 6 in. Alt.: 25,000 ft. Type: Trimetrogon, F31 & F33 cameras only	USN, Mission-M 4. Sortie 001. Run 3. TMA-1012.	11/4/62	Prints & film, 9 x 9 in.	GS

	PHOTOGRAPHY	ORGANIZATION & SORTIE NOS.	DATE	REMARKS	HOLDING ORGANIZATIO
413.	Victoria Land, Northern 72 45 S 166 15 E 73 14 S 169 40 E Total: 37 sets Focal length: 6 in. Alt.: 25,000 ft. Type: Trimetrogon, F31 & F33 cameras only	USN, Mission-M 4. Sortie 001. Run 7. TMA-1013.	11/4/62	Prints & film, 9 x 9 in.	GS
414.	Victoria Land, Northern 72 46 S 170 20 E 70 36 S 155 50 E Total: 179 sets Focal length: 6 in. Alt.: 25,000 ft. Type: Trimetrogon	USN, Mission-M 4. Sortie 002. Run 3. TMA-1035.	11/25/62	Prints & film, 9 x 9 in.	GS
415.	Victoria Land, Northern 70 02 S 155 50 E 72 18 S 170 25 E Total: 185 sets Focal length: 6 in. Alt.: 25,000 ft. Type: Trimetrogon	USN, Mission-M 4. Sortie 003. Run 2. TMA-1036.	11/25/62	Prints & film, 9 x 9 in.	GS
416.	Victoria Land, Northern 73 15 S 169 35 E 73 03 S 166 55 E Total: 45 sets Focal length: 6 in. Alt.: 25,000 ft. Type: Trimetrogon	USN, Mission-M 4. Sortie 003. Run 7. TMA-1037.	11/25/62	Prints & film, 9 x 9 in.	GS
417.	Victoria Land, Northern 71 50 S 170 58 E 69 18 S 155 36 E Total: 207 sets Focal length: 6 in. Alt.: 25,000 ft. Type: Trimetrogon	USN, Mission-M 4. Sortie 004. Run 1. TMA-1030.	11/26/62	Prints & film, 9 x 9 in.	GS

PHOTOGRAPHY - (Cont.)

	PHOTOGRAPHY	ORGANIZATION & SORTIE NOS.	DATE	REMARKS	HOLDING ORGANIZATION
418.	Victoria Land, Northern 72 34 S 159 30 E 73 36 S 168 05 E Total: 88 sets Focal length: 6 in. Alt.: 25,000 ft. Type: Trimetrogon	USN, Mission-M 4. Sortie 004. Run 5. TMA-1029.	11/26/62	Prints & film, 9 x 9 in.	GS
419.	Victoria Land, Northern 73 35 S 170 15 E 72 49 S 163 00 E Total: 34 Focal length: 6 in. Alt.: 25,000 ft.	USN, Mission-M 4. Sortie 005. Run 4. TMA-1065.	11/28/62	Prints & film, 9 x 9 in.	GS
420.	Victoria Land, Northern 73 35 S 170 15 E 72 49 S 163 00 E Total: 5 Focal length: 6 in. Alt.: 22,000 ft. Type: Trimetrogon	USN, Mission-M 4. Sortie 005. Run 4a. TMA-1066.	11/28/62	Prints & film, 9 x 9 in.	GS
421.	Victoria Land, Northern 73 35 S 170 15 E 72 99 S 163 00 E Total: 81 sets Focal length: 6 in. Alt.: 19,000 ft. Type: Trimetrogon	USN, Mission-M 4. Sortie 005. Run 4b. TMA-1067.	11/28/62	Prints & film, 9 x 9 in.	GS
422.	Victoria Land, Northern 73 16 S 163 10 E 73 48 S 168 08 E Total: 63 sets Focal length: 6 in. Alt.: 25,000 ft. Type: Trimetrogon	USN, Mission-M 4. Sortie 005. Run 8. TMA-1068.	11/28/62	Prints & film, 9 x 9 in.	GS

PHOTOGRAPHY - (Cont.)

	PHOTOGRAPHY	ORGANIZATION & SORTIE NOS.	DATE	REMARKS	HOLDING ORGANIZATIO
423.	Victoria Land, Northern 73 35 S 170 30 E 72 13 S 158 45 E Total: 142 sets Focal length: 6 in. Alt.: 25,000 ft. Type: Trimetrogon, F31 camera, 101 Exposures only	USN, Mission-M 4. Sortie 006. Run 4. TMA-1076.	12/3/62	Prints & film, 9 x 9 in.	GS
424.	Victoria Land, Northern 73 51 S 158 55 E 73 54 S 167 40 E Total: 105 sets Focal length: 6 in. Alt.: 25,000 ft. Type: Trimetrogon, F32 & F33 cameras only	USN, Mission-M 4. Sortie 006. Run 6. TMA-1077.	12/3/62	Prints & film, 9 x 9 in.	GS
425.	Victoria Land, Northern 73 20 S 163 40 E 73 45 S 167 20 E Total: 47 sets Focal length: 6 in. Alt.: 25,000 ft. Type: Trimetrogon, F32 & F33 cameras only	USN, Mission-M 4. Sortie 006. Run 8. TMA-1079.	12/3/62	Prints & film, 9 x 9 in.	GS
426.	Victoria Land, Northern 74 02 S 167 15 E 73 40 S 163 50 E Total: 33 sets Focal length: 6 in. Alt.: 25,000 ft. Type: Trimetrogon, F32 & F33 cameras only	USN, Mission-M 4. Sortie 006. Run 9. TMA-1078.	12/3/62	Prints & film, 9 x 9 in.	GS

PHOTOGRAPHY - (Cont.)

	PHOTOGRAPHY	ORGANIZATION & SORTIE NOS.	DATE	REMARKS	HOLDING ORGANIZATION
427.	Whitmore Mountains 83 10 S 103 45 W 82 18 S 104 00 W Total: 45 sets Focal length: 6 in. Alt.: 16,000 ft. Type: Trimetrogon, F31 & F33 cameras only	USN, Mission-S 7. Sortie 001. Run 2. TMA-1145.	2/1/63	Prints & film, 9 x 9 in.	GS
428.	Whitmore Mountains 82 25 S 103 00 W 82 45 S 107 20 W Total: 43 sets Focal length: 6 in. Alt.: 16,000 ft. Type: Trimetrogon, F31 & F33 cameras only	USN, Mission-S 7. Sortie 001. Run 3. TMA-1146.	2/1/63	Prints & film, 9 x 9 in.	GS
429.	Whitmore Mountains 83 10 S 103 45 W 82 18 S 104 00 W Total: 44 sets Focal length: 6 in. Alt.: 16,000 ft. Type: Trimetrogon	USN, Mission-S 7. Sortie 003. Run 2. TMA-1137.	2/8/63	Prints & film, 9 x 9 in.	GS
430.	Whitmore Mountains 82 25 S 103 00 W 82 45 S 107 20 W Total: 46 sets Focal length: 6 in. Alt.: 16,000 ft. Type: Trimetrogon	USN, Mission-S 7. Sortie 003. Run 3. TMA-1138.	2/8/63	Prints & film, 9 x 9 in.	GS
431.	Wiencke Island 64 48 S 63 30 W Total: 49 Focal length: 8.25 in. Alt.: Low, varying Type: Hand held oblique	USN, Mission-4. Roll 4.	1/27/63	Film only, 7 x 7 in.	GS

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	PHOTOGRAPHY	PREPARING ORGANIZATION	DATE	REMARKS	HOLDING ORGANIZATION
432.	Antarctica photography & control index: ANARE Total: 17 Focal length: Trimetrogon, 6 in.; vertical, 88.36 mm. Alt.: Varying Type of photography: Trimetrogon & vertical Materials date: 1956-62 Type of control: Astronomical and trigonometrical	Australia. Division of National Mapping	1962	Ozalid 1:1,000,000 (*1:100,000)	GS

Sheets	Coordinates
*Air Photography and Control Index Australian Antarctic Territory Westfold Hills	68 20 - 68 42 S 77 45 - 78 27 E
Air Photography and Control Index Australian Antarctic Territory SS 41-43	72 00 - 76 00 S 60 00 - 78 00 E
SQ 38-39	64 00 - 68 00 S 42 00 - 54 00 E
SQ 40-41	64 00 - 68 00 S 54 00 - 66 00 E
SQ 42-43	64 00 - 68 00 S 66 00 - 78 00 E
SQ 44-45	64 00 - 68 00 S 78 00 - 90 00 E
SQ 46-47	64 00 - 68 00 S 90 00 -102 00 E
SQ 48-49	64 00 - 68 00 S 102 00 -114 00 E
SQ 50-51	64 00 - 68 00 S 114 00 -126 00 E

PHOTOGRAPHY AND CONTROL INDEXES - (Cont.)

	PHOTOGRAPHY	PREPARING ORGANIZATION	DATE	REMARKS	HOLDING ORGANIZATION
432.	Antarctica photography & control index: ANARE (Cont.)	Australia. Division of National Mapping	1962	Ozalid 1:1,000,000	GS

Sheets	Coordinates
SQ 52-53	64 00 - 68 00 S 126 00 -138 00 E
SQ 54-55	64 00 - 68 00 S 138 00 -150 00 E
SR 38-39	68 00 - 72 00 S 42 00 - 54 00 E
SR 40-41	68 00 - 72 00 S 54 00 - 66 00 E
SR 42-43	68 00 - 72 00 S 66 00 - 78 00 E
SR 54-55	68 00 - 72 00 S 138 00 -150 00 E
SR 56-57	68 00 - 72 00 S 150 00 -162 00 E
SR 58-59	68 00 - 72 00 S 162 00 -174 00 E

433.	Executive Committee Range Index: No. 1811 72 - 76 S 115 - 134 W Index: No. 1824 76 - 80 S 118 - 142 W Focal length: 6 in. Alt.: 20,000 ft. above sea level Type: Trimetrogon Quality: Good-Poor Date flown: 1960 Flown by: U.S. Navy	GS	1962	42 x 27 in. 1:1,000,000 Original & copies	GS

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FIELD REPORT NO. 71 - NOVEMBER 1964

NOTE: In general, material included in the Field Report is summarized from regular reports by personnel of Federal agencies, universities and institutions carrying out scientific research in the Antarctic under National Science Foundation grants and with logistic support by the U.S. Navy. In order to ensure that the work of the individual scientists and their institutions is clearly understood, it is requested that prior to using any of this material for public dissemination, such use be discussed with the Office of Antarctic Programs in the National Science Foundation or with the originators of the research as named.

GENERAL

Byrd Station: Wind and drifting snow hampered outdoor activities during the early part of the month. The first of several field parties bound for locations on the plateau or in the Transantarctic Mountains arrived on the 5th. The station water system is again in working order, and the new fuel tunnel has been partially completed.

Eights Station: Three planes arrived this month, and the personnel change-over was completed. Severe weather impeded outdoor work and resupply operations; the leakage through the station roof continued. The amateur radio was operated mainly in the 14 Mc./s. band.

USNS Eltanin: During November 1-8 the Eltanin worked westward along the Pacific-Antarctic Ridge, bottom profiling along the fracture zone explored on Cruise 14. A guyot in the area of stations taken between 56° - 58° S along the 120° W meridian was investigated also. By the end of the month the Eltanin had completed all station work as far west as 179° W, and was under way to Auckland, New Zealand, for docking and overhaul.

Hallett Station: The station received 13 resupply flights from McMurdo during November and supported 58 turbine helicopter flights for geological field work and ice reconnaissance. On the 8th a turbine helicopter carrying two members of the U.S. Geological Survey photogeology group crashed as it attempted to land on a 14,300-ft. peak in the Admiralty Range. The crew and passengers escaped injury and were immediately picked up by an accompanying helicopter and flown the 40 mi. to Hallett Station.

McMurdo Station: The fielding and resupply of field parties continued successfully. Reasonably good weather was a contributing factor. The vehicles continued to operate well as did the field party motor toboggans. Work began on the rehabilitation and construction of a second deck in the warehouse, Building 73.

The sub-ice observation chamber was installed off Hut Point Peninsula, three miles north of McMurdo Station, and secured by wires to deadmen on the undersurface of the ice. No special provisions for heating or ventilation were required. Crystalline ice growth occurring on the ballast portion of the chamber did not affect the field of vision. Audio-visual observations of seals and other marine life and under-ice phenomena were made. Toward the end of the month the chamber was moved further out on the sea ice, six miles northwest of the station.

South Pole Station: Preparations for the South Pole-Queen Maud Land Traverse began in the first week of the month. The station received many visitors as the change-over of station personnel got under way.

BIOLOGY

Hallett Station

Insect Ecology, Bernice P. Bishop Museum: On November 3 this field study began at Hallett Station. Collecting trips were made to Coulman Island, the Possession Islands, Cape Adare, and points along the northern coast of Victoria Land. Four 24-hour microclimatological observations were made: two at Hallett, one at Redcastle Ridge and one on Possession Islands. Three transect studies were made to determine the distribution of species on the flats and the east slope of the station. Considerable mite material was brought from the Possession Islands for study in the laboratory. The investigators collected three species of springtails and about seven species of free-living mites besides some ectoparasites and feather mites. Ecological information was assembled on most of the species, and it is probable that one or two new species of mites were found.

McMurdo Station

Biolab, Stanford University: The annual inventory was completed with the exception of section II-4. Water distillation units and the snow melter were drained and cleaned and a second distillation unit was put into operation. The oceanographic-biological equipment was stored in one part of Building 72. New linoleum flooring was laid in the entrance hallway.

Seal Physiology, University of Arizona: Nine diving and

orientation experiments were completed at station 3, six miles northwest from McMurdo Station, through sea ice over a depth of 600 m. Mechanical depth recorders and pressure-sensing transmitters were used in profile recording of approximately 300 seal dives; in many cases, entire dive profiles have been obtained. Most of the seals remained in the release area, and their behavior in the water at the release site was observed from the sub-ice observation chamber established near station 3. Four hundred and twelve seals were tagged between Capes Royds and Armitage; of these, 322 were pups. Twenty milk and fourteen urine samples were collected from lactating females and nursing pups, for water balance studies.

Penguin Populations, Johns Hopkins University: Three Adélie penguin navigation experiments have been completed. The fourth, now underway, involves release of a group of 20 birds for observing departure directions. A NNE direction orientation was reconfirmed for Cape Crozier Adélies released in the center of the Ross Ice Shelf. Cape Crozier birds released in the pack ice north of their rookery continued to show a NNE departure direction. Mirnyy Station birds oriented to the WNW. The Cape Crozier and Mirnyy Station penguins subjected to Ross Ice Shelf conditions for three weeks showed a change in orientation. Radio telemetry techniques are being tested for use in long-distance tracking.

Seal Ecology and Acoustics, New York Zoological Society and Woods Hole Oceanographic Institution: Visual observations of Weddell seals were conducted from the sub-ice observation chamber, with sounds recorded over hydrophones suspended at 9 and 12 m. depth. Simultaneous recordings were made at 150 and 300 m. Visual observations and photographs by scuba divers were also made in the area of the chamber and of a non-breeding colony near an ice crack. Recordings were made of Adélie and Emperor penguins, a killer whale and leopard seals off Cape Crozier. The enzyme levels in the liver, kidney, heart, brain muscle and fat of ten seals were assayed for alpha-glycerol-phosphate-dehydrogenase. Parasitological investigation of five seals was accomplished. Quantitative and qualitative bacteriology on the Weddell seal intestinal flora was carried out, including aerobic and anaerobic investigations.

Algal Ecology, Ohio State University: Three-day field trips were made to Lakes Bonney and Vanda and to upper Victoria Lake for collection of terrestrial and fresh-water algae. Dry specimens were returned to the Biolab for culture. Water samples from upper Victoria Lake, Lake Vanda and upper Victoria and Taylor Glaciers were analyzed for pH, alkalinity, calcium hardness, chlorinity, copper, ferrous iron, manganese, nitrate, nitrite, total phosphate, silicate and sulfate. Taylor Glacier melt-water contained large quantities of chloride, sulfate and ferrous iron, and higher concentrations of phosphate and nitrate than previously reported. Temperature, conductivity and

light measurements were made at half-meter intervals in Lake Vanda. Peak temperature and conductivity occurred 14.5 to 15 m. below the surface in a depth of 29.2 m. Fifteen to 17 percent of the incident light penetrated the 3.7 m. thick ice; six percent reached the bottom. One liter water samples were taken at 3-m. intervals and passed through 0.45 Millipore field monitors, hence were returned to the Biolab and cultured on neopeptone and acetate agar.

Marine Algae, Old Dominion College: Scuba diving, snorkeling and dredging were used to obtain ecological data and specimens of marine algae at Cape Crozier, Cape Bird, Horseshoe Bay, Black Sand Beach, and Depot and Inexpressible Islands. Nineteen dives were made for algal collections. A rich algal vegetation was found beneath the ice and in open water, including six species of Rhodophyta. Dominant species are Iridaea obovata and Phylophora antarctica, while Hildebrandia lacanellieri is the dominant species on smaller rocks in water to 35 m. depth. Algal growth was not found on exposed rock surfaces three or more feet in diameter, except in fissures. Iridaea obovata at Cape Crozier covers an area 2 km. long and 0.3 km. wide. Algae generally appear in the sublittoral rather than the littoral region at a depth of 4 - 5 m. below low tide level to 35 m. depth. Phylophora antarctica and Phycodrys quercifolia were growing richly under 0.5 m. thick ice at a depth of 6 - 20 m., 9 mi. from the open Ross Sea. Algae were observed in all stages of development, indicating no aphotic conditions below the ice; light intensity averaged 17 foot candles over a 48-hour period.

Vertebrate Parasites, Roanoke College: Fifty-two species of Trematomus bernacchii, 51 T. borchgrevinki, and five T. centronotus were collected in 324 m. depth off Cape Armitage for endoparasitological study. Preparations of Acanthocephala included four adults from the intestinal tracts of fishes and 23 encysted juvenile worms from the peritoneal cavities; one nonencysted juvenile worm was taken from the intestinal tract of an Adélie penguin. Materials collected include 100 thin and thick blood smears from T. bernacchii and T. borchgrevinki.

Fish Metabolism and Growth, Stanford University: Preliminary results of metabolism studies of tissues of the fish, genus Trematomus indicated an increase in metabolic rate with temperature over a narrower range than that in many temperate-zone fishes. Enzyme isolation techniques are being developed, following repair of necessary enzymological electronic equipment. The recently received field acquarium was rigged for experiments on possible diurnal metabolic fluctuations in T. bernacchii. Three 24-hour runs revealed no clear pattern. Species appear to lose periodic fluctuations observed during pronounced day-night fluctuations in October.

CARTOGRAPHY

U.S. Navy: By the end of the month 26% of the total planned aerial photography, amounting to 24,345 flight line miles, had been accepted.

Aerial photography accomplished through November 22 included:

Queen Maud Land	100%
North Victoria Land	100%
Heritage Range	35%
Pensacola Mountains	Photography flown but not acceptable for cartographic purposes
Balleny Islands	80%

Special photography:

Pensacola Mountains	30%
Shackleton Glacier Area	100%
Wisconsin Range	100%
Nunataks	16%
Ice movement (McMurdo Sound)	50%
Bay of Whales-Okuma Bay	100%
Kainan Bay	15%
Cape Crozier penguin rookery	100%
Allan Nunatak area	100%

U.S. Geological Survey: On November 7 topographic engineers completed control surveying of the David Glacier area and northern Victoria Land.

GEOLOGY

Byrd Station

University of Minnesota: This continuing field study of the Ellsworth Mountains and related areas (Sonntag and Pagano Nunataks) began from Byrd Station on November 21.

Ohio State University: This project, the latest in a series of investigations of the Horlick Mountains, will attempt to relate the geology of the Wisconsin Range to areas studied previously. The field party established its base camp during the first week of the month.

Texas Technological College: Geologists bound for the Shackleton Glacier area for detailed stratigraphic sectioning arrived at the station on November 5. This party will use two portable seismographs to obtain information on local seismic activity and crustal thickness. By the second week of October the entire party had been flown to the base camp site, and field work began on November 19.

Hallett Station

Photogeology, U.S. Geological Survey: Geologists traveling by turbine helicopters surveyed an area of more than 20,000 sq. mi. between 71° and 73° S and bounded by 163° E and the Ross Sea coast of Victoria Land. Geologic contacts were observed from the air. Landings were made to study rock structures and collect samples.

Contact between the Cambrian gneisses and granites of the Transantarctic Mountains and the low grade metasediments and granites of the younger Paleozoic goesyncline of northeastern Victoria Land was found to be a sheared and highly deformed unconformity. Beacon sandstone without fossils overlies the older rocks in the southwest and has been tilted gently and broken by normal faults. The coastal volcanic peninsulas, Cape Adare, Cape Hallett, and Cape Daniell, and Coulman Island consist of submarine lava-breccias at least 6,000 feet uplifted along faults, and overlain by subaerial lavas and cinder cones. Vulcanism has been of late Cenozoic age. The youngest cones are no more than a few thousand years old.

The field party returned to McMurdo Station for field studies during two weeks when the turbine helicopers were under repair. The project was completed on November 27.

McMurdo Station

Patterned Ground, University of Wisconsin: Automatic recording of soil and air temperatures continued at two sites.

GLACIOLOGY

Byrd Station

Ohio State University and University of Wisconsin: Members of the South Pole-Queen Maud Land Traverse party visited Byrd Station this month to conduct a series of glaciological measurements. The average accumulation at 100 stakes during the last 11 months was 24 cm. of snow with a water equivalent of 8.2 cm. Compaction measured in a deep pit was 10 cm. in 10 meters over the past year. Test results with a moisture probe in a 10 m. drill hole correlated well with the known density.

South Pole Station

Ohio State University and University of Wisconsin: Glaciologists of the traverse party found that the moisture probe tested at Byrd Station would not operate at low temperatures. A heater installed in the preamplifier apparently solved the difficulty.

A 2 m. snow pit was dug beside a 5-year-old accumulation stake for a comparison of stratigraphic analysis with known ages of various firn layers. From the pit wall the investigators collected 105 samples for particulate analysis, 50 samples for oxygen isotope study, and 15 samples for radioactive debris investigation. A study of the pattern of accumulation in a field of 115 stakes, in place from three to eight years, showed a mean accumulation of 20 cm., but accumulation at 12% of the stakes measured less than 4 cm. Several sastrugi were sectioned and photographed in the first stage of a study of these features.

METEOROLOGY

Byrd Station

U.S. Weather Bureau: The atmospheric ozone studies showed a lowering of absolute ozone level from 100 mb. to 130 mb. with the greatest amount of total ozone, 419 μmb., occurring at 123 mb. on the 28th. Surface readings by the Mast and Regener instruments were near normal, and the Dobson spectrophotometer performed well. Hourly humidity, dew points, and vapor pressures can now be computed since the infrared hygrometer recordings were re-established. Three remote-recording thermometers were installed to measure snow temperatures at depths of 3, 100, and 200 cm. Since 1962 drifting snow had decreased the effective heights of some of the surface radiation instruments by as much as 3 m.; all instruments were raised to their original relative heights. Three new records were set this month, viz.: highest average station pressure, 23.958 in.; greatest total amount of snowfall, 6.6 cm.; and highest average wind speed, 19.8 mph.

Eights Station

U.S. Weather Bureau: A prolonged period of bad weather was the predominant meteorological feature at this station. The Campbell-Stokes sunshine recorder was modified and mounted on a platform 76 cm. above the snow surface. It is not yet operative since adjustments are still being made. The ceiling light projector was dug out and remounted above the snow surface and turnbuckles were used to strengthen and correct a slight tilt of the wind mast. Fifteen more poles and five flags were placed on the snowstake trail and notches were filed at the 60 in. mark on all 49 snowstakes. A major shift in the ice

field was discovered between the markers for mile 7 and 8, but no measurements were taken due to the lack of a theodolite. The greatest snowfall in 24 hours, 3.8 cm., occurred on the 23rd-24th. The average net change of the snow surface for the month was +2.5 cm. At the end of the month the surface was generally smooth with a few sharply defined cave-like drifts, and walking conditions were good. The total sunshine for the month was 94 h. 25 min., which is 13% of the possible sunshine.

The atmospheric electricity program proceeded normally until the 26th when the probe became inoperative. A calibration attempt was unsuccessful and the sensitivity remains very low. There were several short periods without data due to the probe cap filling with snow.

The Mast surface ozone meter was given a complete overhaul after last month's fire and was restored to normal operation on the 3rd. Some data were lost on the 7th and 8th due to exhaust fume contamination, and the data were questionable on other days. The two main causes of missing data are fumes from the camp generator and snow blockage of the intake tube.

Hallett Station

U.S. Weather Bureau: Some of the helium left from previous Navy stores was used for balloon inflation early in the month, but local generation began as soon as water became available. A pressure regulator and vaporizer unit was installed in the generator room and operated for one test run. Regular operation has been postponed until excessive ammonia leaks in the system can be corrected. The instrument shelter for the aspirated thermometer has been removed from a large snowdrift and dew point recordings are being made on a three-hourly schedule. All other operations were normal.

McMurdo Station

U.S. Navy: (For standard surface and upper air observations, see SUMMARY OF METEOROLOGICAL OBSERVATIONS)

South Pole Station

U.S. Weather Bureau: The new crew replaced the old one on the 10th of the month. Routine maintenance was performed on the Regener and Mast instruments. A total of 90 ozone observations was made this month. The ozonesonde program was stopped after four releases because of a burned-out motor in the ozone generator. This program will not be restarted until a replacement arrives. The solar radiation program was operative except for the CSIRO radiometer which exhibited a spurious diurnal variation.

The inflation weight of radiosonde balloons was changed to obtain a higher burst altitude, resulting in a 4,000-m. improvement. The Campbell-Stokes sunshine recorder was installed and put into operation on the 16th. The average net change of the snow surface measured on 50 snowstakes was 0. Other snow accumulation measurements were made in four areas. Initial measurements were at the new stake field which has legs 7 miles long oriented toward 30°, 120°, 210° and 300°. The mean accumulation along each leg was, respectively, 20.3 cm., 13.7 cm., 20.0 cm., and 12.6 cm. At the end of each leg is an arrangement of 20 stakes in the form of a cross with the stakes 160 m. apart. The accumulations at the four crosses were 20.2 cm. at 30°, 25.6 cm. at 120°, 22.1 cm. at 210°, and 20.5 cm. at 300°. The third area of measurement is the old 36-stake field,which showed an accumulation of 13.2 cm. In the fourth field of six stakes accumulation also measured 13.2 cm.

STATION SEISMOLOGY

Byrd Station

U.S. Coast & Geodetic Survey: Operations were terminated on the 27th of this month in order to reconstruct the seismic vault, an 8-ft. high prefabricated plywood structure. The seismometers were pinned to avoid damage during movement.

South Pole Station

U.S. Coast & Geodetic Survey: The short-period north-south galvanometer was replaced and the new component is now operating. Two days' recordings were lost due to a loose collar on the short-period recording drum drive motor.

TRAVERSE OPERATIONS

Ohio State University, U.S. Coast & Geodetic Survey and University of Wisconsin: By the end of the month final preparations for the South Pole-Queen Maud Land Traverse were under way. The ten members of the traverse party were assembled at the South Pole Station and 90% of the traverse equipment was loaded for a planned departure on December 2. The traverse vehicles are two Model 843 Sno-Cats and one Model 743 D Sno-Cat fitted with a drill rig for making seismic shot holes. The Sno-Cats will tow two rolling fuel transporters, one Maudheim sled, and three one-ton sleds. Major repairs were required on two vehicles before the traverse could get under way: the seismic Sno-Cat required a new transmission, and the glaciology Sno-Cat, a new engine.

Seismic reflection measurements were successfully completed at the

South Pole. The echo time of 1491 msec. was identical to results obtained by a Soviet traverse in 1959-60 at a point 2.5 km. away. The signal-to-noise ratio tripled when a series of 12 geophones were arranged in parallel array, and excellent reflection was obtained from a 20 m. shot depth.

Using Tellurometers, the geophysicists established a 6 by 7 km. four-stake strain network.

UPPER ATMOSPHERE PHYSICS

Byrd Station

Aurora and Airglow, Arctic Institute of North America: Equipment calibration was the only activity this month.

Forward Scatter, National Bureau of Standards: A new mast was placed on the antenna tower and the terminating resistors mounted directly on the mast to reduce suspension problems previously experienced.

Geomagnetism, U.S. Coast & Geodetic Survey: A temperature control system which will make use of three available thermostats is being installed in the magnetic variations building. Ten sets of observations were made this month with the following results for the average absolute values:

declination	70°31.2'
horizontal field	16,312 g.
vertical field	57,838 g.

There were two Sudden Storm Commencements, one on the 9th at 0202 GMT and the other on the 30th at 0501 GMT.

Ionospheric Absorption, National Bureau of Standards: A new riometer antenna was constructed and mounted at an angle of 50° to the old antenna. Both riometers were operated to establish a correlation between the two antennas.

Ionospheric Soundings, National Bureau of Standards: Values were obtained for foF2 35% of the possible time. Some film was lost due to camera and darkroom difficulties and there was considerable malfunctioning of transmitter and receiver. The maximum median foF2 was 6.5 Mc./s. qualified at 1800 local and the minimum median, 4.4 Mc./s. at 0500 local time.

Micropulsations, National Bureau of Standards: The micropulsation equipment continued to operate well.

Radio Noise, National Bureau of Standards: Receiving equipment was disassembled and removed from the radio noise building.

VLF, National Bureau of Standards: The antenna was set up northeast of the VLF building in a north-south direction. Recording equipment was installed and operated to check out the entire system; the site appears to be very quiet.

VLF-ELF, Stanford University and Pacific Naval Laboratory: All programs are operating and the film development and preliminary data analysis are current. Knee-whistlers with triggered emissions were noted on the 3rd, and periodics were frequent throughout the month. On the 30th an amplitude-modulated whistler-mode emission with a period of 5 sec. was recorded on the real time film and on tape. Installation of the new equipment is proceeding rapidly.

Eights Station

Aurora and Airglow, Arctic Institute of North America: Personnel changeover took place between the 20th and the 28th. The patrol spectrograph, for which the timer had been modified, is in working condition and has been reinstalled in the aurora tower. The mirror for the all-sky camera is broken, and the spare mirror has been returned to the United States for resilvering. One K-100 camera was shipped out for repairs; the other two K-100's work smoothly. Repairs were begun on the chassis of the all-sky camera. The NBS photometer has been installed in the aurora tower and is now in working condition. An antenna for the WWV receiver is being constructed.

Geomagnetism, U.S. Coast & Geodetic Survey: The changeover of personnel was completed on the 28th. The baseline for the vertical magnetometer was changed when the instrument was releveled and the record trace readjusted. The declination baseline was readjusted, but a new baseline is yet to be determined. Ten sets of absolute values were obtained before the baseline changes for the following average values:

declination	32°35.8'
horizontal field	21,051 g.
vertical field	48,312 g.

Ionospheric Absorption, National Bureau of Standards: The new antenna and other equipment arrived but have not yet been installed. The riometer equipment is operating, but snow interference continues to cause erratic signals.

VLF and Micropulsations, National Bureau of Standards: The micropulsation equipment was operational throughout the month, and few data were lost. Small magnitude events occurred on the 28th for 12

hours, and a generally disturbed condition existed on the 29th and 30th. The disturbance of the 30th was correlated with VLF events. Two hours of VLF data were lost due to an antenna preamplifier failure. A large event of wide-band periodic emissions lasted for about 12 hours on the 23rd; a similar event occurred on the 26th. Better temperature control in the VLF building has improved the quality of the processed films. The bulk of the data was packed for shipment. The new WWV antenna was erected, and reception is good on both 10 and 15 Mc./s.

VLF, Stanford University: All equipment operated, and data acquisition progressed well. Remarkable emission activity with long-term periods was noted on the 23rd. Fifteen-minute periodics were especially strong on the 26th and the 27th but otherwise whistler and emission activity was moderate. The OGO-A satellite recordings progressed without incident. Although the frequency standard and associated equipment had not arrived, an alternate standard was used which provided acceptable accuracy. All schedules were being met on the OGO-A contacts. The change of the antenna configuration has been completed on the north-south leg, and was progressing on the east-west leg.

McMurdo Station

Cosmic Rays, Bartol Research Foundation: Tests performed on the calibration sources indicated that radiation levels were within normal limits and constitute no hazard to personnel safety.

Forward Scatter, National Bureau of Standards (Bartol Research Foundation Observer): The forward scatter transmitter was modified by adding two turns to the final tank coil according to methods used by observers at Byrd and South Pole Stations. This adjustment improved the stability of the transmitter and increased its efficiency.

Ionospheric Absorption, Douglas Aircraft Company: The riometers continued to function normally.

South Pole Station

Aurora and Airglow, Arctic Institute of North America: The aurora program is inoperative during the summer months.

Cosmic Radiation, Bartol Research Foundation: The count rate for the right channel of the neutron monitor was higher than normal after the preamplifiers for the right and center units were changed. Excessive heat in the equipment rack caused the right channel of the meson telescope to drift, and a room fan was placed by the rack to stabilize the temperature. Both units are being replaced with units shipped from McMurdo. The shielding against interference from

the ionosonde continued to be effective.

Forward Scatter, National Bureau of Standards: A new RF section was installed in the receiver of the Byrd-South Pole link, and after some initial difficulty the equipment is running satisfactorily. Repositioning of the tap on the transmitter tank coil resulted in easier tuning of the Pole-Halley Bay transmitter. The transmitter also appears to be less susceptible to warm-up detuning.

Geomagnetism, U.S. Coast & Geodetic Survey: Temperature control was improved in the variations building by the installation of a thermostat. The battery in the M49A magnetometer was replaced. The monthly means of 14 sets of absolute values were:

declination	27°48.2'
horizontal field	15,918 g.
vertical field	56,502 g.

Ionospheric Absorption, National Bureau of Standards: Extensive modifications were made to the Model 41 riometer. The antenna was matched to 50 ohms and the modified riometer performed well. An attempt was made to repair the spare unit but several critical parts were missing, and proper repair was not possible.

Ionospheric Soundings, National Bureau of Standards: Wintering-over personnel from both 1964 and 1965 collaborated to make a thorough refurbishing of the electronic system of the ionosonde. Parasitics and interference with the cosmic ray equipment have been minimized.

VLF, Stanford University (National Bureau of Standards Observer): The VLF equipment ran fairly well. On several days whistlers were recorded between 0250 and 0550 GMT., and on the 18th a periodic variation in chorus intensity was noted from 1150 to 1250 GMT.

U.S. SCIENTISTS AT FOREIGN STATIONS

Mirnyy Station (U.S.S.R.): On November 5 the U. S. Exchange Scientist to the Soviet Antarctic Expedition, George H. Meyer, was flown to Mirnyy Station, where he will winter over in 1965. Mr. Meyer, a microbiologist from the University of Texas, will investigate the occurrence and distribution of bacteria, fungi, and other microorganisms in the vicinity of the station and the Haswell Islands.

FOREIGN SCIENTISTS AT U. S. STATIONS

Byrd Station: Dr. V. S. Ignatov, the Soviet Exchange Scientist who wintered at Byrd Station in 1964, visited the South Pole Station on November 16 to study upper atmosphere data obtained there. He returned to Byrd Station on the 20th, and on the 28th visited Eights Station.

Hallett Station: Dr. Dietland Müller from the University of Freiburg began his studies of penguin behavior on November 6. Light intensities were measured at all hours of the day from the 6th to the 17th of the month and were found to increase by a factor of 400 from midnight to noon. Observations of the general activity of three pairs of penguins were made from the 12th to the 16th. From the 14th to the 23rd the frequency of the "upright posture", a courtship display of the male, was counted in a small group. There appears to be a clear daily rhythm with maximum activity at 0900 local time and minimum at noon. On November 28 two penguins were subjected to controlled light conditions for five days for acclimation before starting experiments to determine their biological clock system. A systematic record is being kept of the number of penguins migrating on the sea ice as a function of the time of day.

South Pole-Queen Maud Land Traverse, I: Participating in the traverse party are Dr. E. E. Picciotto from the University of Brussels and Mr. Olav Dybvadskog from the Norwegian Polar Institute. Both scientists will conduct glaciological studies.

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SUMMARY OF METEOROLOGICAL OBSERVATIONS - NOVEMBER 1964

	Byrd Station	Eights Station	McMurdo Station	So. Pole Station	Hallett Station
Temperature, (°C.)					
Average	-19.8	-17.8	-7.8	-38.7	-7.7
Highest	- 9.4/23#	- 1.8/05#	-1.1/29#	-28.8/30#	-1.1/10#
Lowest	-31.8/14#	-32.2./01#	-18.3/05#	-50.6/02#	-21.1/05#
Station Pressure (Inches)					
Average	23.958	27.862	29.220	20.280	29.295
Highest	24.28/30#	*30.026/17#	*29.679/13#	20.620/10#	*29.660/13#
Lowest	23.43/02#	*28.998/02#	*28.708/01#	19.820/01#	*28.640/01#
Precipitation (Inches)	0.22	0.31	0.0	Trace	0.03
Snowfall (Inches)	2.2	4.3	- - -	Trace	0.3
Wind					
Prevailing Direction	NE	S	E	ENE	SSW
Average speed (Knots)	16.7	12.7	11.8	10.0	5.0
Fastest mile (MPH)	44/N/16#	55/S/11#	- - -	28/NNE/09#	45/SSE/21#
Peak gust (Knots)	- - -	50/S/11#	58/ESE/01#	50/	- - -
Average Sky Cover	7.1	8.6	5.8	3.0	4.1
No. clear days	2	2	0	19	13
No. partially cloudy	7	5	12	9	12
No. cloudy days	21	23	18	2	5
No. days with visibility less than 1/4 mile	11	13	2	0	0
No. Radiosondes	56	- - -	60	50	60
Avg. height of Radiosondes (m)	28,208	- - -	28,733	26,162	28,115
No. Ozonesondes	4	- - -	- - -	4	- - -
Avg. height of Ozonesondes (m)	34,158	- - -	- - -	29,499	- - -
No. Radiometersondes	- - -	- - -	- - -	- - -	- - -
Avg. height of Radiometersondes (m)	- - -	- - -	- - -	- - -	- - -

All figures above have been taken from radio messages and are unconfirmed

* Sea-level pressure

** North defined along 0° Greenwich

\# Date of Occurrence