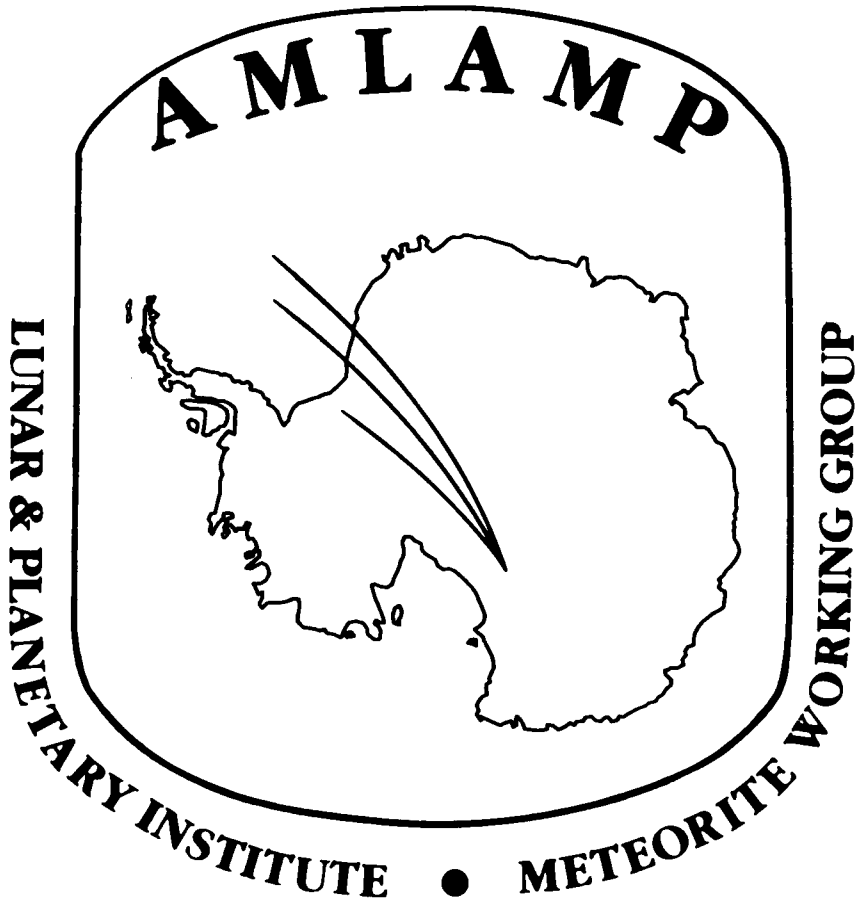


ANTARCTIC METEORITE LOCATION AND MAPPING PROJECT



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ANTARCTIC METEORITE
LOCATION AND MAPPING PROJECT

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Contents

Introduction to the Antarctic Meteorite Location Map Series	1
Allan Hills Main Icefield Meteorite Location Map—North and South Sections 1987 Edition Explanatory Text	7
Allan Hills Near Western Icefield Meteorite Location Map 1986 and 1987 Editions Explanatory Text	21
Allan Hills Middle Western Icefield Meteorite Location Map 1986 and 1987 Editions Explanatory Text	29
Allan Hills Far Western Icefield Meteorite Location Map—East and West Sections 1986 and 1987 Editions Explanatory Text	35
Elephant Moraine Icefield Meteorite Location Map 1986 and 1988 Editions Explanatory Text	47
Appendix. Meteorite Location Map and Thematic Map Ordering Information	57

Antarctic Meteorite Location Map Series

INTRODUCTION

Antarctica has been a prolific source of meteorites since meteorite concentrations were discovered in 1969 (Yoshida *et al.*, 1971). Since 1976 the United States has joined Japan as the only nations that have sent expeditions specifically to search for meteorites. The U.S. program, currently under the direction of W. A. Cassidy (University of Pittsburgh), is supported by the U.S. National Science Foundation. The Antarctic Search For Meteorites (ANSMET) project has been active over much of the Trans-Antarctic Mountain Range. The first ANSMET expedition (a joint U.S.-Japanese effort) discovered what turned out to be a significant concentration of meteorites at the Allan Hills in Victoria Land (Cassidy, 1977; Cassidy, 1978; Cassidy, 1979). Later reconnaissance in this region resulted in the discovery of meteorite concentrations on icefields to the west of the Allan Hills, at Reckling Moraine, and Elephant Moraine (Cassidy, 1980; Cassidy and Annexstad, 1981; Schutt, 1982; Cassidy *et al.*, 1983; Cassidy and Schutt, 1984).

ANSMET expeditions also have found important concentrations in other regions of Antarctica; the Lewis Cliff-Walcott Neve area of the Beardmore region eventually may rival the Allan Hills icefields in numbers of specimens recovered (Cassidy *et al.*, 1986; Cassidy, 1987) and the Thiel Mountains-Pecora Escarpment region has good potential to produce significant numbers of meteorites (Schutt *et al.*, 1983). Several other less productive areas have been identified as well as a small number of individual meteorite finds (Cassidy, 1977; Cassidy, 1979; Cassidy and Annexstad, 1981; Schutt *et al.*, 1983; Cassidy *et al.*, 1986). Additional meteorite concentration localities undoubtedly will be found in the future. Figure 1 shows the general location of meteorite concentrations and individual finds (modified from Annexstad *et al.*, 1986) in Antarctica. Table 1 is a listing of these areas, the abbreviations used for identifying meteorites found there, and their geographic coordinates. A summary of Antarctic meteorite field work and an overview of recent meteoritic and related glaciological investigations can be found in Bull and Lipschutz (1982) and Annexstad *et al.* (1986).

The mapping of the locations of meteorites found on the antarctic icesheet can play an important role in meteorite and glaciological investigations. Maps are visual aids in pairing studies, especially when fragments of the same fall are found in a given area during different field

seasons. The distribution of meteorites on a given stranding surface may give insights into the concentration mechanism(s) or define areas in which glaciological studies should be concentrated. Thematic maps of meteorite types, masses, terrestrial ages, or combinations of those parameters, will yield additional clues.

Accordingly, we are preparing Antarctic meteorite location maps for the specimens found by the ANSMET project. We have prepared this report to accompany the meteorite location maps that have been completed to date (Schutt *et al.*, 1987a-e). Reduced versions of these maps are shown in the following sections. Meteorite location maps and thematic maps may be ordered from the Lunar and Planetary Institute (LPI). Information for ordering these maps is given in the appendix.

METEORITE LOCATION MAPS

Yanai (1983, 1984) has published meteorite location maps for the Yamato Mountains and the Allan Hills. The Allan Hills map shows the locations of specimens recovered during the 1976-1977, 1977-1978, and 1978-1979 seasons. The Antarctic Meteorite Location and Mapping Project (AMLAMP) grew out of a need to present the location data that had been acquired in subsequent years by the ANSMET expeditions. Location maps for different regions and meteorite concentration areas are in various stages of development. At this time the Allan Hills-David Glacier Region Map Series is most fully developed.

The first maps of the Allan Hills Main and Near Western Icefields and the Elephant Moraine Icefield were preliminary hand-drawn versions. Subsequently, T. Meunier (U.S. Geological Survey) produced a computer-generated map showing meteorites recovered during the 1982-1983 search of the Far Western Icefield. A copy of the Cartographic Automatic Mapping (CAM) program that was used was acquired from the U.S.G.S. and installed, after modification, into the DEC-VAX computer system at the Lunar and Planetary Institute.

Separate databases have been created for each of the icefields from data contained in the *Antarctic Meteorite Newsletter* or directly from computer files at the Antarctic Meteorite Laboratory at the Curatorial Facility, Johnson Space Center (JSC) and field and survey data. To date these databases include specimen names, classifications, masses, and location and map data. Terrestrial ages of the

meteorites will be added when a sufficient number have been determined. The databases have been cross-checked for accuracy with the meteorite database computer files at JSC and with the ANSMET database maintained at the University of Pittsburgh. The databases for each of the icefields will eventually be loaded into the System-1032 database environment from which they can be retrieved as a total file or as separate files.

The CAM program is capable of generating maps in many map projections, but by present standards it is a somewhat cumbersome and inelegant program with numerous limitations. Corrections and enhancements have been made to the CAM program, and a utility program was written so that name overprinting is minimized. An interactive editing program is used to finalize name positioning.

Map scales vary as a function of the long dimensions of the icefields, the density of data points that must be presented, and limitations of the CAM program and plotting facilities. Where very high densities of meteorites were found, insets of the area at a larger map scale have been added. Geographic latitude and longitude tick marks are located outside the map borders. North is toward the top of the maps. Geographical features such as bedrock, moraine, and icefield boundaries have been derived from field data and from enlargements of aerial and satellite photographs. These were added by hand to draft versions of the maps, then digitized.

The maps of the Allan Hills-David Glacier Region series are plotted in the Universal Transverse Mercator (UTM) projection. The UTM projection is a conformal, plane rectangular coordinate system. A grid system is placed on the maps as a visual aid in gauging distances and locating specific meteorites. The grid crosses are based on the UTM coordinate system and are at various spacings, depending upon map scale. UTM coordinate values are included on the map for reference. The crosses define grid cells that can be used in locating specific meteorites using an alphanumeric "road map" system. For example, if the location of ALH 84113 is sought, find its grid cell in the listing in the *Near Western Icefield Meteorite Location Map Explanatory Text*. The coordinate pair of the grid cell is F-8. On the map the numbers are found along the north and south margins and the letters along the east and west sides.

Explanatory Texts

Explanatory texts for the meteorite location maps are found in the following sections. Detailed background, meteorite, and map information specific to each icefield are given. Included are listings of all meteorites recovered from the given icefield, listed by field season, for each of the field seasons during which collections were made (except for the Allan Hills Main Icefield 1976-1977, 1977-1978, and 1978-1979 collections). The meteorite listings contain information current with the date of this publication. Meteorite name, classification, weight, and grid cell coordinates are provided. Also included in the listings is the *Antarctic Meteorite Newsletter* reference [i.e., vol.(no.)] for each meteorite (most recent issue if there are multiple references). Further information on specific meteorites can be obtained from the *Antarctic Meteorites Bibliography Database* maintained on the VAX computer at the LPI as well as the *Antarctic Meteorite Newsletter*.

Icefields with meteorite concentrations are always associated with single or multiple escarpments or step-like topographic features. The upper break in slope generally parallels the long dimension of an icefield and probably strikes perpendicular to the direction of ice sheet flow. Slope profiles are given for each of the mapped icefields in the explanatory texts. These profiles are based on widely spaced survey data and field observations and are therefore only diagrammatic. The profiles were selected in areas where a reasonable amount of survey data was present and they may not be entirely representative of other sections on that particular icefield. The downslope katabatic wind flow, which is responsible for exposing the ice, preventing snow accumulation, contributing to the ablative effects, and the concentration of small meteorite specimens at the downwind ice edge, is generally normal to the escarpments. More complete descriptions of the field settings of meteorite concentrations can be found in *Annexstad et al.* (1986) and *Bull and Lipshutz* (1982).

ALLAN HILLS-DAVID GLACIER REGION METEORITE LOCATION MAP SERIES

The Allan Hills-David Glacier region (covered by the U.S.G.S. Antarctica reconnaissance 1:250,000 series Convoy Range and Mt. Joyce maps) of Victoria Land has

been an important source of meteorite specimens since the initial discovery of meteorites at the Allan Hills in the austral summer of 1976–1977. Most of the collection work in the early years of the ANSMET project concentrated on systematic searches of the icefield in the immediate vicinity of the Allan Hills (the Main Icefield), but reconnaissance and subsequent systematic searches of ice patches lying some distance to the west and southwest showed meteorites in significant numbers. These are now called the Allan Hills Near Western Icefield, the Allan Hills Middle Western Icefield, and the Allan Hills Far Western Icefield, because they are geographically distinct from the Main Icefield (Fig. 2). Reconnaissance of the Reckling Moraine Icefield and Elephant Moraine Icefield in 1978–1979 and 1979–1980, respectively, showed that there was good potential for meteorite concentrations at those sites. Subsequent systematic searches there resulted in the recovery of significant numbers of meteorites. There have been single meteorite finds from two locations in the region. One specimen (OTT 80301) was found mixed in with abundant terrestrial material on ice near Outpost Nunatak. Another specimen (ALH 85151) was recovered from a small, isolated icefield 15 km north of the Allan Hills Far Western Icefield (Fig. 2).

Subjective plotting on sketch maps, base maps, and air photos was initially used to document the meteorite locations. In the 1980–1981 season an effort was made to systematically survey the meteorites that were found at the Reckling Moraine Icefield. This surveying has been continued in all subsequent seasons. Crude surveying methods (with an estimated precision of 10 m) were used until late in the 1983–1984 season when a theodolite and electronic distance measuring (EDM) instrument became available. During the 1982–1983 season a satellite surveying instrument was used to make precise position determinations of three base stations at the Allan Hills Far Western Icefield (Cassidy *et al.*, 1983). In the following season, an open survey traverse was made from these points, crossing the Middle Western and Near Western icefields, and ultimately tying into the network established at the Main Icefield by Nishio and Annexstad (1979). Although subject to the accumulation of a large error, this traverse tied the icefields together and provided base stations to which individual meteorite locations could be tied. All survey calculations for the Allan Hills icefields and Elephant

Moraine Icefield involved working in the Universal Transverse Mercator (UTM) coordinate system.

The following maps of the Allan Hills-David Glacier region meteorite location map series have been developed and are currently available: (1) Allan Hills Main Icefield, (2) Allan Hills Near Western Icefield, (3) Allan Hills Middle Western Icefield, (4) Allan Hills Far Western Icefield, and (5) Elephant Moraine Icefield.

The maps are plotted on 33 in × 44 in (E size) plotting paper. Examples of each of the maps at a reduced scale are included in following explanatory texts. Table 2 is a summary of the numbers of meteorites recovered from each of the mapped icefields from the 1976–1977 through the 1986–1987 seasons.

Acknowledgments. The surveying and mapping of the meteorite locations and icefields could not have been accomplished without the assistance and perseverance of ANSMET expedition members during a number of field seasons. Roberta Score provided assistance with the meteorite database. Robert Walker provided the enlargements of the satellite images used in the explanatory texts. Kevin Burke, Kin Leung, and others on the staff of the LPI gave support and advice to the project. The Meteorite Working Group was also forthcoming with encouragement and support. Michael Zolensky offered helpful suggestions and comments. The field work was conducted under National Science Foundation Grants DPP 77-21742, 78-21104, and 83-14496.

REFERENCES

- Alberts F. G., ed. (1981) *Geographic Names of the Antarctic*. National Science Foundation, Washington, D.C.
- Annexstad J. O., Schultz L., and Wänke H., eds. (1986) *Workshop on Antarctic Meteorites*. LPI Tech. Rpt. 86-01, Lunar and Planetary Institute, Houston. 199 pp.
- Bull C. and Lipschutz M. E., eds. (1982) *Workshop on Antarctic Glaciology and Meteorites*. LPI Tech. Rpt. 82-03, Lunar and Planetary Institute, Houston. 57 pp.
- Cassidy W. A. (1977) Antarctic search for meteorites. *U.S. Antarct. J.*, 12(5) 96–98.
- Cassidy W. A. (1978) Antarctic search for meteorites during the 1977/78 field season. *U.S. Antarct. J.*, 13(5), 39–40.
- Cassidy W. A. (1979) Antarctic search for meteorites (ANSMET 1978/79). *U.S. Antarct. J.*, 14(5), 41–42.
- Cassidy W. A. (1980) Antarctic search for meteorites, 1979/80. *U.S. Antarct. J.*, 15(5), 49–50.
- Cassidy W. A. (1987) The antarctic search for meteorites during the field season 1986–1987. *U. S. Antarct. J.*, 22(5), 52–53.
- Cassidy W. A. and Annexstad J. O. (1981) Antarctic search for meteorites (ANSMET), 1980/81. *U.S. Antarct. J.*, 16(5), 61–62.
- Cassidy W. A. and Schutt J. (1984) Search for meteorites 1983–84. *U.S. Antarct. J.*, 19(5), 39–40.
- Cassidy W. A., Meunier T., Buchwald V., and Thompson C. (1983) Search for meteorites in the Allan Hills/Elephant Moraine area, 1982–83. *U.S. Antarct. J.*, 18(5), 81–82.

- Cassidy W. A., Englert P., Thomas T., and Thompson C. (1986) Search for meteorites in the Beardmore Glacier Region. *U.S. Antarct. J.*, 21(5), 81-82.
- Nishio F. and Annexstad J. O. (1979) Glaciological survey in the bare ice area near the Allan Hills in Victoria Land, Antarctica. *Mem. Natl. Inst. Polar Res., Spec. Issue (Jpn)*, 15, 13-23.
- Schutt J. (1982) Results of the Antarctic search for meteorites, 1981-82. *U.S. Antarct. J.*, 17(5), 56-57.
- Schutt J., Rancitelli L. A., Krähenbühl U., and Crane R. (1983) Exploration for meteorite concentrations in the Thiel Mountains/Pecora Escarpment region, 1982-83. *U.S. Antarct. J.*, 18(5), 83-86.
- Schutt J., Fessler B., and Cassidy W. A. (1987a) *Allan Hills Main Icefield Meteorite Location Map, North and South Sections*, 1:10,000. Lunar and Planetary Institute, Houston.
- Schutt J., Fessler B., and Cassidy W. A. (1987b) *Allan Hills Near Western Icefield Meteorite Location Map*, 1:12,500. Lunar and Planetary Institute, Houston.
- Schutt J., Fessler B., and Cassidy W. A. (1987c) *Allan Hills Middle Western Icefield Meteorite Location Map*, 1:25,000. Lunar and Planetary Institute, Houston.
- Schutt J., Fessler B., and Cassidy W. A. (1987d) *Allan Hills Far Western Icefield Meteorite Location Map, East and West Sections*, 1:25,000. Lunar and Planetary Institute, Houston.
- Schutt J., Fessler B., and Cassidy W. A. (1987e) *Elephant Moraine Icefield Meteorite Location Map*, 1:12,500. Lunar and Planetary Institute, Houston.
- Yanai K. (1983) Sheet 2 - Yamato Mountains. *Locality Map Series of Antarctic Meteorites*. National Institute of Polar Research, Tokyo, Japan.
- Yanai K. (1984) Sheet 1 - Allan Hills. *Locality Map Series of Antarctic Meteorites*. National Institute of Polar Research, Tokyo, Japan.
- Yoshida M., Ando H., Omoto K., Naruse R., and Ageta Y. (1971) Discovery of meteorites near Yamato Mountains, East Antarctica. *Antarct. Rec.*, 39, 62-65.

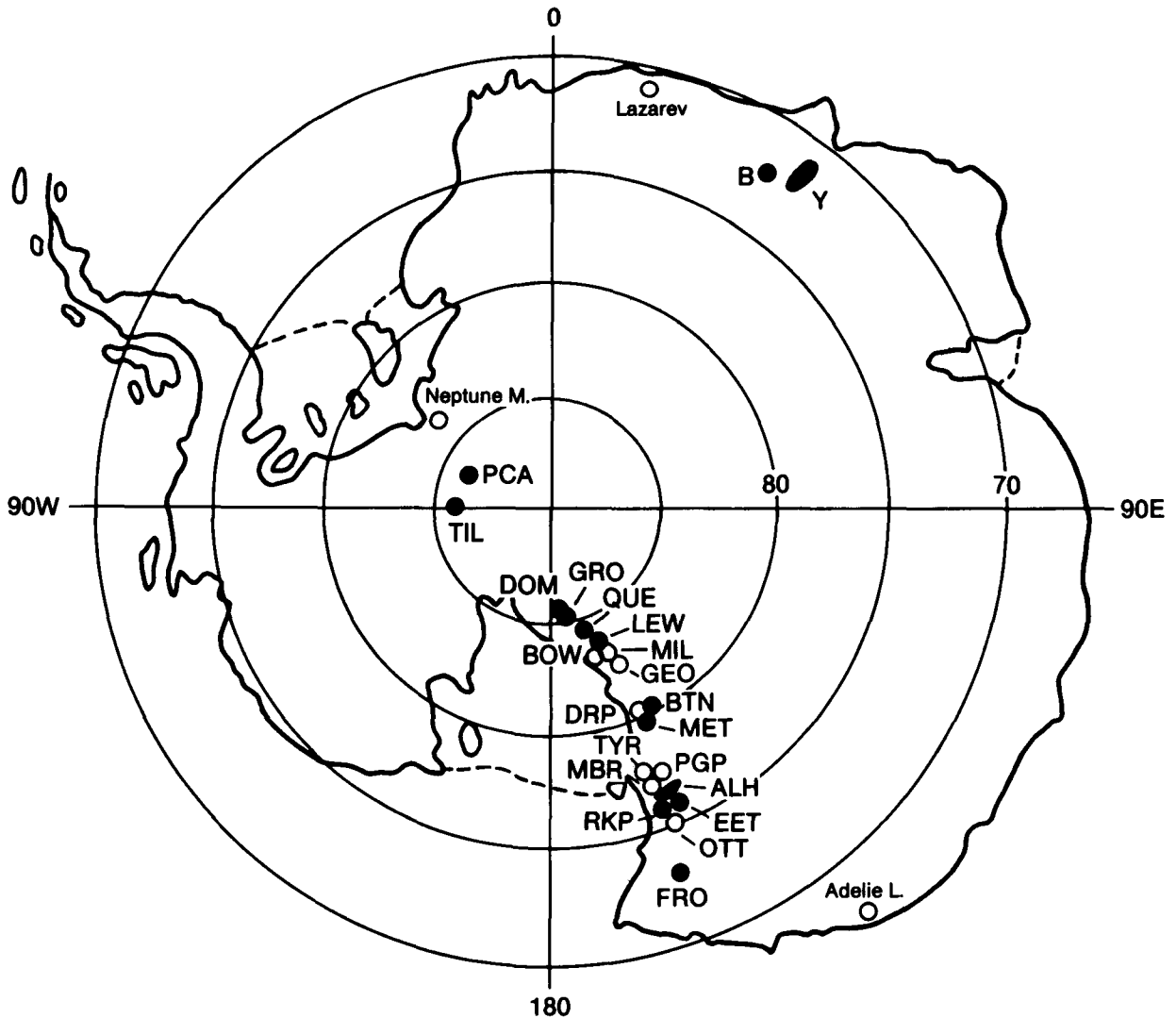


Fig. 1. Find localities of Antarctic meteorites. Filled symbols indicate concentrations with many specimens.

TABLE 1. Abbreviation* and coordinates of Antarctic meteorite find localities (modified after *Annexstad et al., 1986*).

Abbreviation	Locality	Coordinates [†]	
ALH	Allan Hills	76°43'S	159°40'E
B	Belgica Mountains	72°35'S	31°15'E
BTN	Bates Nunatak	80°15'S	153°30'E
BOW	Bowden Neve	83°30'S	165°00'E
DRP	Derrick Peak	80°04'S	156°23'E
DOM	Dominion Range	85°20'S	166°30'E
EET	Elephant Moraine	76°11'S	157°10'E
FRO	Frontier Mountains	72°59'S	160°20'E
GEO	Geologists Range	82°30'S	155°30'E
GRO	Grosvenor Mountains	85°40'S	175°00'E
ILD	Inland Forts	77°38'S	161°00'E
LEW	Lewis Cliff	84°30'S	165°00'E
DRP	Derrick Peak	80°04'S	156°23'E
DOM	Dominion Range	85°20'S	166°30'E
EET	Elephant Moraine	76°11'S	157°10'E
FRO	Frontier Mountains	72°59'S	160°20'E
GEO	Geologists Range	82°30'S	155°30'E
GRO	Grosvenor Mountains	85°40'S	175°00'E
ILD	Inland Forts	77°38'S	161°00'E
LEW	Lewis Cliff	84°17'S	161°05'E
MBR	Mount Baldr	77°35'S	160°34'E
MET	Meteorite Hills	79°41'S	155°45'E
MIL	Miller Range	83°15'S	157°00'E
OTT	Outpost Nunatak	75°50'S	158°12'E
PCA	Pecora Escarpment	85°38'S	68°42'W
PGP	Purgatory Peak	77°20'S	162°18'E
QUE	Queen Alexandra Range	84°00'S	168°00'E
RKP	Reckling Moraine	76°16'S	159°15'E
TYR	Taylor Glacier	77°44'S	162°10'E
TIL [‡]	Thiel Mountains	85°15'S	91°00'W
Y	Yamato Mountains	71°30'S	35°40'E

*The earlier individual meteorite finds named Adeline Land(1912), Lazarev(1961), Neptune Mountains(1964), and Thiel Mountains(1961) are not abbreviated.

[†]The geographic coordinates of the localities are derived from *Alberts (1981)* and are not necessarily a representative location coordinate for the meteorite concentration of find site.

[‡]TIL represents the current usage abbreviation for later finds in the Thiel Mountains region.

TABLE 2. Numbers of meteorites* recovered only from individual icefields in the Allan Hills - David Glacier region, Antarctica for which meteorite location maps are available (1976-1986 collections).

Recovery Season	Allan Hills Main Icefield	Allan Hills Near Western Icefield	Allan Hills Middle Western Icefield	Allan Hills Far Western Icefield	Elephant Moraine Icefield
1976-1977	9	-	-	-	-
1977-1978	298	21	-	-	-
1978-1979	259	-	5	-	-
1979-1980	53	-	-	-	10
1980-1981	32	-	-	-	-
1981-1982	261	43	11	-	-
1982-1983	-	-	-	45	9†
1983-1984	29	11	34	9	197
1984-1985	34	70	35	123	9
1985-1986	17	-	-	140	-
1986-1987	13	-	-	-	3
Total	1005	145	85	317	228

*Based upon named meteorites from the JSC database and not number of fragments or specimens actually recovered.

[†]Does not include specimens recovered from icefields to the west and northwest of Elephant Moraine (see Elephant Moraine Meteorite Location Map explanatory text).

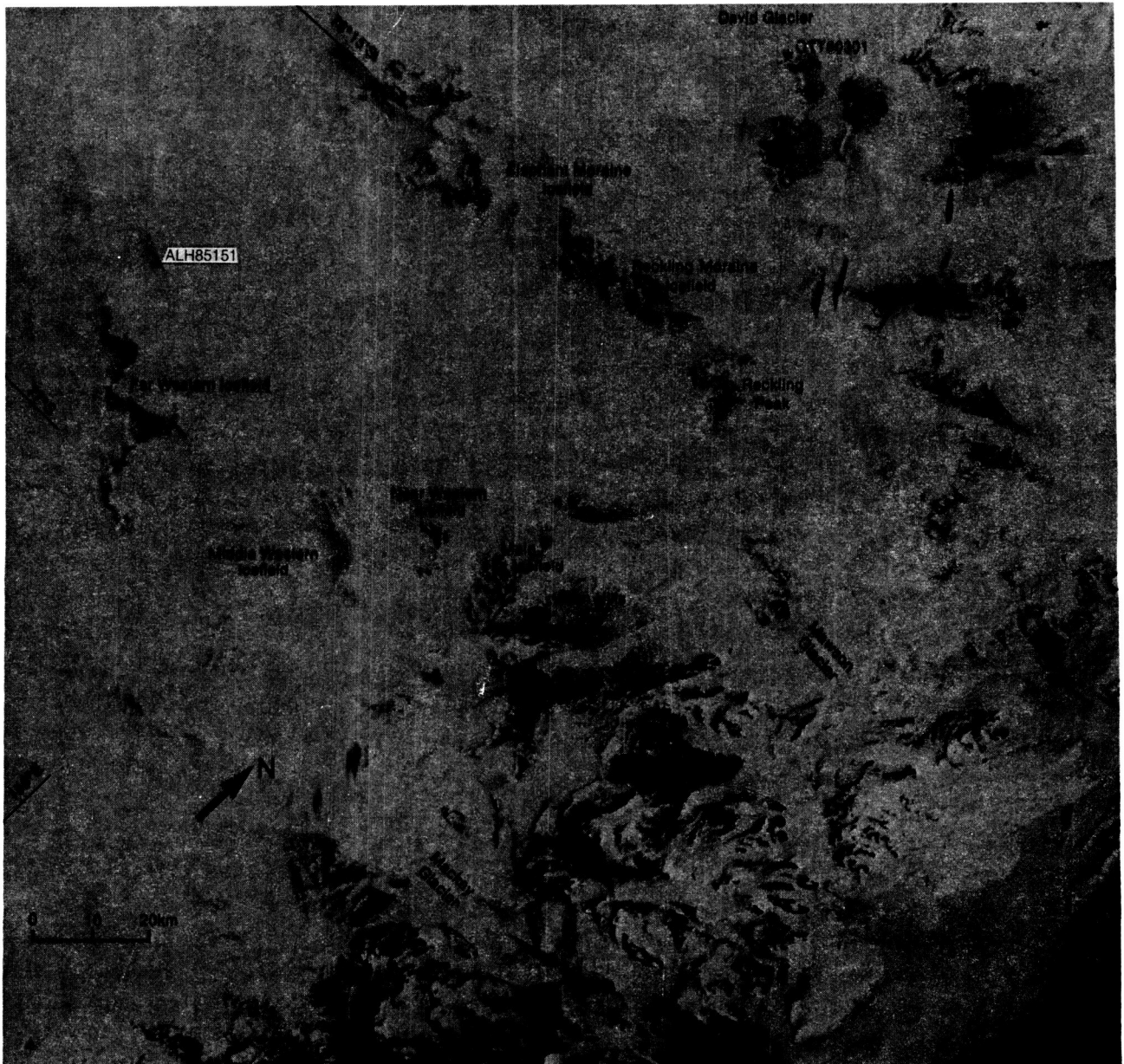


Fig. 2. Satellite photo of the Allan Hills-David Glacier region, Victoria Land. (Black and white photo from enhanced image courtesy of the U.S. Geological Survey)

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ALLAN HILLS MAIN ICEFIELD METEORITE LOCATION MAP— NORTH AND SOUTH SECTIONS

1987 Edition Explanatory Text with Meteorite Listing for the 1979, 1980, 1981,
1983, 1984, 1985, and 1986 Collections

The Allan Hills Main Icefield is located immediately west of the Y-shaped Allan Hills nunatak (Fig. 2). Approximately 75 sq km of ice are exposed on this northward trending icefield. Nearly 22 km long and 7.5 km at the widest point, this icefield has yielded 1005 meteorites. Figure 3 is an enlarged portion of Fig. 2 showing the Main Icefield area and the location of two slope profiles (Fig. 4). *Annexstad* (1983) and recent studies by *Faure and Buchanan* (1987) provide detailed descriptions of the Main Icefield area and attempt to explain the meteorite concentration mechanism(s).

The Allan Hills Main Icefield was the first meteorite concentration locality found in the Transantarctic Mountains. At the close of the 1976–1977 field season, a helicopter reconnaissance visit resulted in the recovery of 45 specimens representing 9 individual meteorites. Detailed foot searches in the next two seasons produced 566 specimens. A total of 85 specimens was recovered in random searches during visits to the Main Icefield in the 1979–1980 and 1980–1981 seasons. Systematic searching was continued during the 1981–1982 season when nearly all of the exposed ice area of the Main Icefield was searched in detail or visited on reconnaissance traverses, resulting in 261 specimens recovered. Periodic return visits have resulted in additional finds in the 1983–1984 (28), 1984–1985 (35), 1985–1986 (17), and 1986–1987 (13) seasons.

Yanai's meteorite location map (1984) shows the locations of meteorites recovered during the 1976–1977, 1977–1978, and 1978–1979 seasons. With certain exceptions, detailed in the next paragraphs, the specimens recovered from the Main Icefield in the following seasons for which we have reliable location data are plotted on the *Allan Hills Main Icefield Meteorite Location Map*. In the following listing of meteorites from the Main Icefield table (Table 3) is included showing the types of meteorites recovered and their numbers.

Because of the size of the icefield and the high density of meteorite specimens, two map sections had to be produced. Reduced scale examples of the northern and southern map sections are shown in Figs. 5 and 6. The

areas covered by the northern and southern sections are shown in Fig. 3. There is no overlap between the two map sections.

A small number of meteorites has been found in the vicinity of the Allan Hills or on the Main Icefield areas not covered by the map sections. One specimen (ALH 84243) was found on bedrock in Man Haul Bay, far removed from any ice (Fig. 3). Only one meteorite has been found on the ice in Man Haul Bay (see *Yanai*, 1984). Seven meteorites (ALHA81037, ALHA81093, ALHA81100, ALH 84056, ALH 84071, ALH 84101, and ALH 85122) have been found on ice during random traverses and searches north of the mapped area besides the meteorite locations on the map by *Yanai* (1984).

Other meteorites have been found on outcrop, apparently stranded by retreating ice. Three specimens (ALH 85037, ALH 85048, ALH 85123) were found on bedrock 2–4 m above the present ice surface near the southern end of the icefield.

Most of the meteorite locations on the Main Icefield have been referenced to the survey network established by *Nishio and Annexstad* (1979) or to surveyed geographic features. Field notes and sketch map data were used to document the locations of meteorites found during the 1979–1980 and 1980–1981 seasons. Crude locating or surveying methods (pelorus and snowmobile odometer) were used in the 1981–1982 season. In the 1983–1984 season we began to use a theodolite and EDM to precisely survey meteorite locations. The locations of the 1986–1987 meteorites were obtained from sketch map data provided by G. Faure. All meteorites that were not surveyed with the theodolite/EDM were plotted on a hand-drawn base map. The data points were then digitized along with the geographic features. The map was generated from merged databases of digitized and computed meteorite locations. Therefore, even though most of the meteorite locations not derived from the theodolite/EDM survey are not precisely determined, the locations of those meteorites found within a given season are accurately shown relative to one another. Since there are many precisely determined control stations, the meteorite locations determined by the

different location methods can be constrained so that the map accurately shows the distribution of meteorites on the icefield.

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collection and mapping project in the 1986-1987 season. Their efforts were supported by NSF Grant DPP 83-14136.

REFERENCES

- Annexstad J. O. (1983) Meteorite Concentration and Glaciological Parameters in the Allan Hills Icefield, Victoria Land, Antarctica. Dissertation, Johannes Gutenberg University, Mainz. 151 pp.
- Faure G. and Buchanan D. (1987) Glaciology of the east antarctic icesheet at the Allan Hills - A preliminary interpretation. *U.S. Antarct. J.*, 22(5), 74-75.
- Yanai K. (1984) Sheet 1 - Allan Hills. *Locality Map Series of Antarctic Meteorites*. National Institute of Polar Research, Tokyo, Japan.

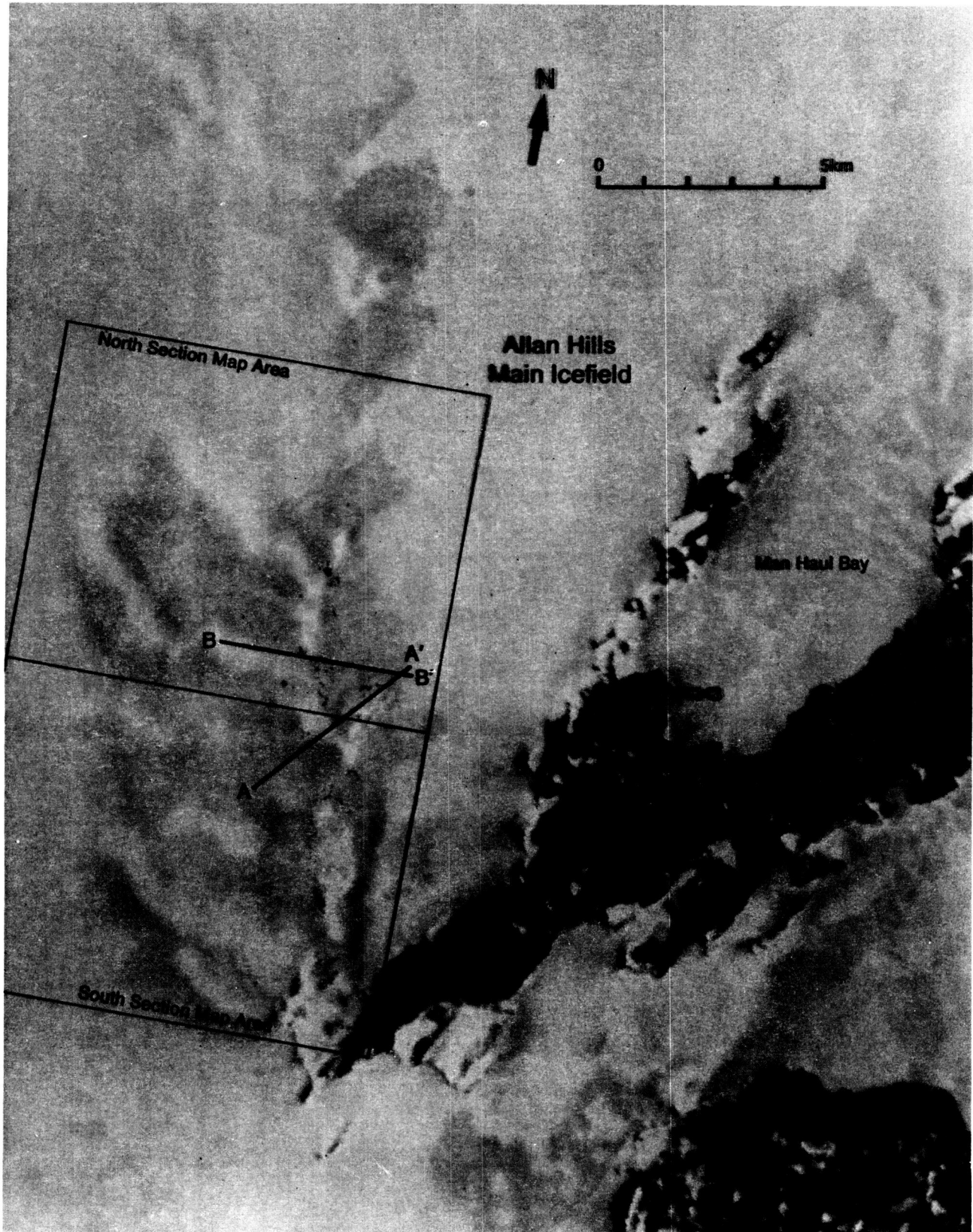


Fig. 3. Enlarged portion of satellite image showing the Allan Hills Main Icefield and area covered by the north and south sections of the meteorite location maps. Locations of slope profiles are also shown.

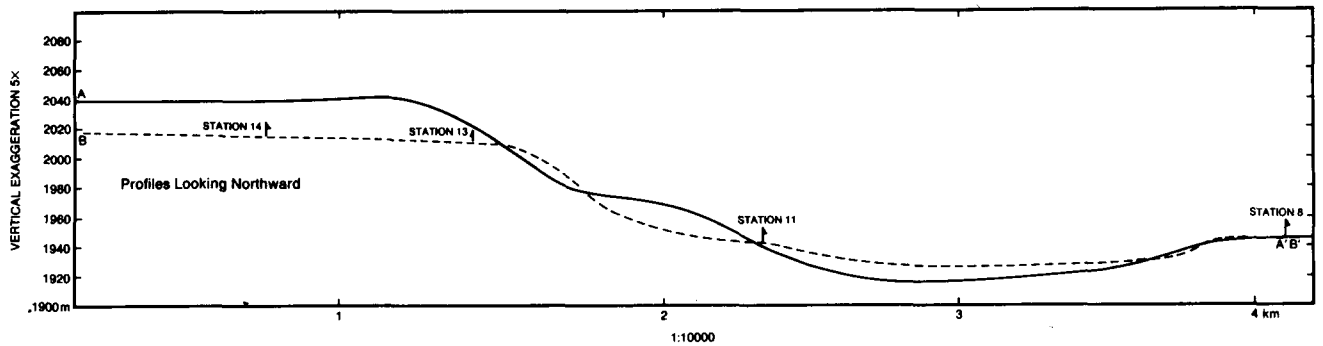


Fig. 4. Slope profiles of the Allan Hills Main Icefield.

TABLE 3. Types of meteorites recovered from the Allan Hills Main Icefield (1979, 1980, 1981, 1983, 1984, 1985, and 1986 collections).

Number of Specimens	Classification
2	achondrite (unique)
2	carbonaceous C2
1	carbonaceous C3V
1	diogenite/mesosiderite
1	E-4 chondrite
2	eucrite
1	eucrite (anomalous)
6	eucrite (polymict)
1	eucritic breccia
1	H chondrite
2	H(?) chondrite
35	H-4 chondrite
192	H-5 chondrite
1	H-5 chondrite w/enclaves
74	H-6 chondrite
1	iron
1	iron-ataxite
1	iron-octahedrite
33	L-3 chondrite
1	L-3,4 chondrite
3	L-4 chondrite
10	L-5 chondrite
60	L-6 chondrite
2	LL-3 chondrite
1	LL-5 chondrite
3	LL-6 chondrite
1	shergottite (?)
1	ureilite

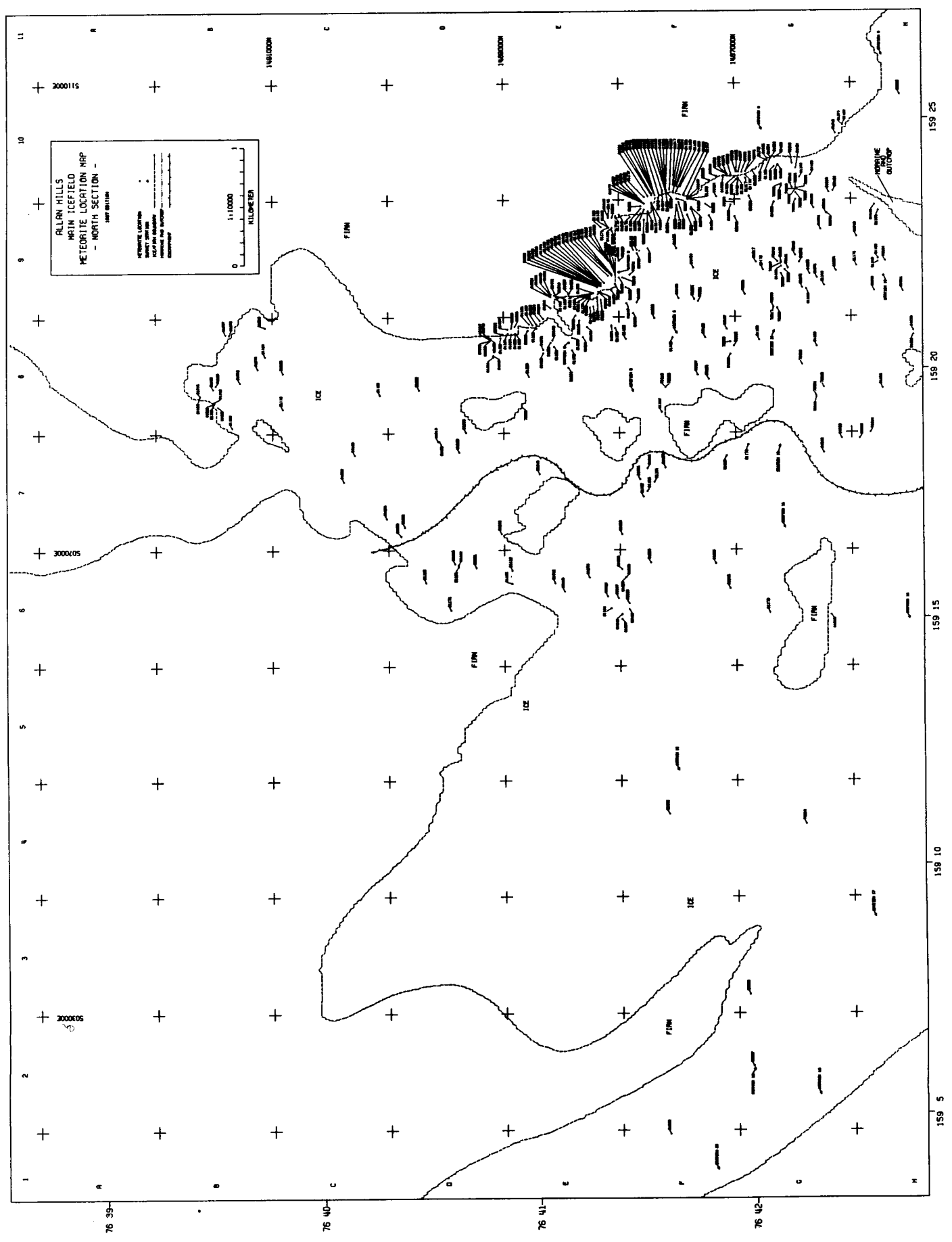


Fig. 5. Reduced example of the Allan Hills Main Icefield Meteorite Location Map, northern section.

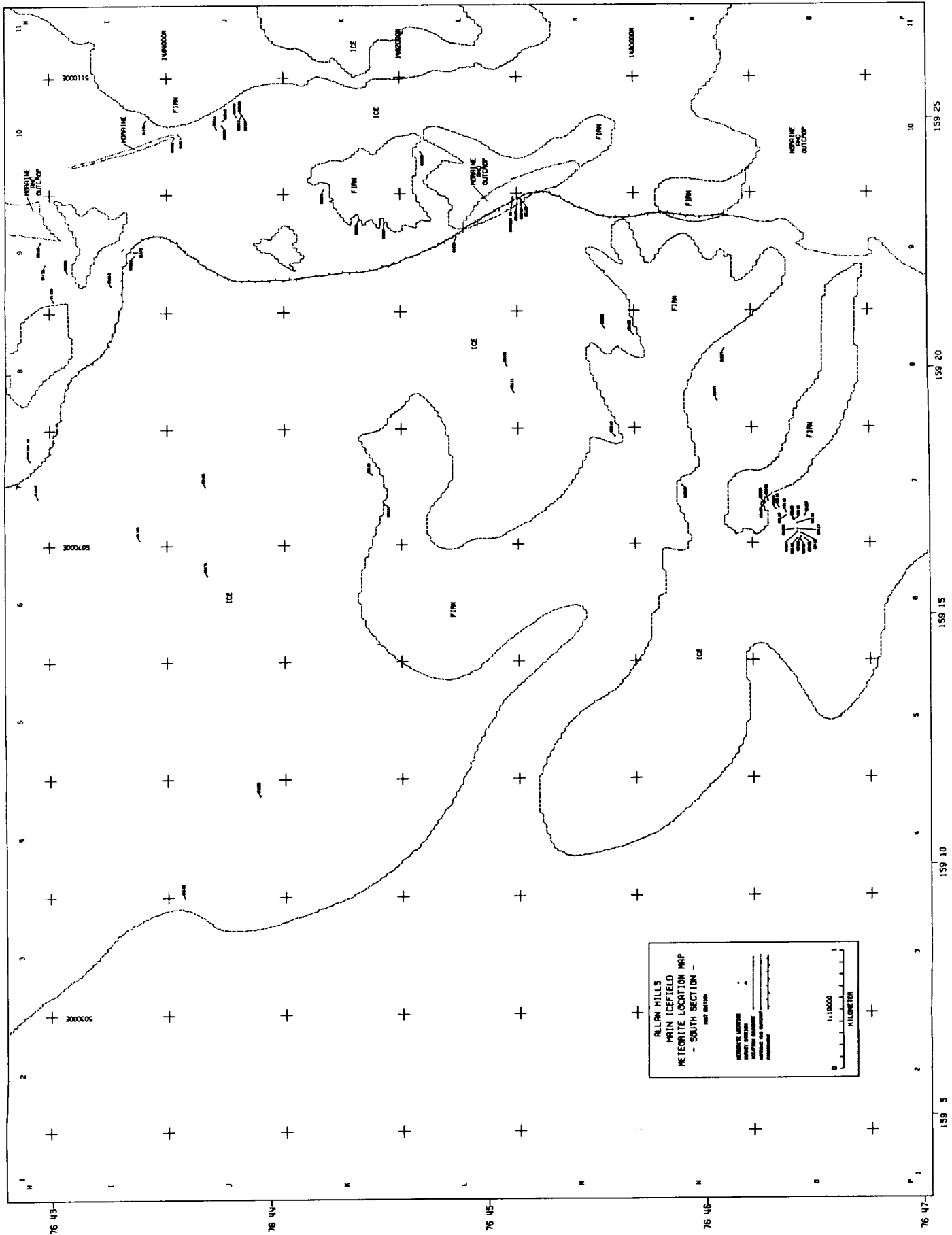


Fig. 6. Reduced example of the Allan Hills Main Icefield Meteorite Location Map, southern section.

Listing of meteorites recovered from the Allan Hills Main Icefield and survey stations
(1979, 1980, 1981, 1983, 1984, 1985, and 1986 collections).

Meteorite Name	Classification	Weight (g)	Grid Cell	Newsletter
ALHA79001	L-3 chondrite	32.3	G-9	4(1)
ALHA79002	H-6 chondrite	222.8	G-10	4(1)
ALHA79003	LL-3 chondrite	5.1	E-9	4(1)
ALHA79004	H-5 chondrite w/enclaves	34.9	G-10	4(1)
ALHA79005	H-6 chondrite	60.0	G-9	4(1)
ALHA79006	H-5 chondrite	41.0	G-9	4(1)
ALHA79007	L-6 chondrite	142.3	F-8	4(1)
ALHA79008	H-5 chondrite	12.0	G-8	4(1)
ALHA79009	H-5 chondrite	75.7	G-10	4(1)
ALHA79010	H-5 chondrite	25.1	F-8	4(1)
ALHA79011	H-5 chondrite	14.0	G-9	4(1)
ALHA79012	H-5 chondrite	191.9	?	4(1)
ALHA79013	H-5 chondrite	28.3	G-8	4(1)
ALHA79014	H-5 chondrite	10.8	?	4(1)
ALHA79015	H-5 chondrite	64.0	G-8	4(1)
ALHA79016	H-6 chondrite	1146.0	?	4(1)
ALHA79017	euclite (polymict)	310.0	G-9	4(1)
ALHA79018	L-6 chondrite	120.7	G-10	4(1)
ALHA79019	H-6 chondrite	12.1	F-9	4(1)
ALHA79020	H-6 chondrite	4.2	E-8	4(1)
ALHA79021	H-5 chondrite	29.4	F-9	4(1)
ALHA79022	L-3,4 chondrite	31.4	G-10	4(1)
ALHA79023	H-4 chondrite	68.1	G-10	4(1)
ALHA79024	H-6 chondrite	21.6	?	4(1)
ALHA79025	H-5 chondrite	1208.0	?	4(1)
ALHA79026	H-5 chondrite	572.0	?	4(1)
ALHA79027	L-6 chondrite	133.2	G-2	4(1)
ALHA79028	H-6 chondrite	16.3	G-9	4(1)
ALHA79029	H-5 chondrite	505.5	?	4(1)
ALHA79031	H-5 chondrite	2.7	G-10	4(1)
ALHA79032	H-5 chondrite	2.6	G-10	4(1)
ALHA79033	L-6 chondrite	280.8	G-9	4(1)
ALHA79034	H-6 chondrite	12.6	H-7	4(1)
ALHA79035	H-4 chondrite	37.6	F-8	4(1)
ALHA79036	H-5 chondrite	20.2	G-4	4(1)
ALHA79037	H-6 chondrite	14.8	G-9	4(1)
ALHA79038	H-5 chondrite	49.7	G-10	4(1)
ALHA79039	H-4 chondrite	108.3	?	4(1)
ALHA79040	H-5 chondrite	13.2	G-10	4(1)
ALHA79041	H-5 chondrite	20.1	F-9	4(1)
ALHA79042	H-5 chondrite	11.5	E-9	4(1)
ALHA79043	L-6 chondrite	62.2	G-9	4(1)
ALHA79045	L-3 chondrite	115.4	G-10	4(1)
ALHA79046	H-5 chondrite	89.7	G-9	4(1)
ALHA79047	H-5 chondrite	19.3	G-9	4(1)
ALHA79048	H-5 chondrite	36.7	?	4(1)
ALHA79049	H-6 chondrite	54.0	?	4(1)
ALHA79050	H-5 chondrite	27.0	F-8	4(1)
ALHA79051	H-5 chondrite	23.9	G-8	4(1)
ALHA79052	L-6 chondrite	22.6	F-9	4(1)
ALHA79053	H-5 chondrite	86.1	F-8	4(1)
ALHA79054	H-5 chondrite	36.0	F-9	4(1)
ALHA79055	H-6 chondrite	15.3	G-9	4(1)
ALHA80101	L-6 chondrite	8725.0	O-7	5(1)
ALHA80102	euclite (polymict)	471.2	F-6	5(1)
ALHA80103	L-6 chondrite	535.9	O-7	5(1)
ALHA80104	iron-ataxite	882.0	J-7	5(1)
ALHA80105	L-6 chondrite	445.1	O-7	5(1)
ALHA80106	H-4 chondrite	432.2	F-6	5(1)
ALHA80107	L-6 chondrite	177.8	O-7	5(1)
ALHA80108	L-6 chondrite	124.5	O-7	5(1)
ALHA80110	L-6 chondrite	167.6	O-7	5(1)
ALHA80111	H-5 chondrite	42.4	L-8	5(1)
ALHA80112	L-6 chondrite	330.7	O-7	5(1)

Listing of meteorites recovered from the Allan Hills Main Icefield and survey stations (continued)
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Meteorite Name	Classification	Weight (g)	Grid Cell	Newsletter
ALHA80113	L-6 chondrite	312.6	O-7	5(1)
ALHA80114	L-6 chondrite	232.8	O-7	5(1)
ALHA80115	L-6 chondrite	306.0	O-7	5(1)
ALHA80116	L-6 chondrite	191.2	O-7	5(1)
ALHA80117	L-6 chondrite	89.0	O-7	5(1)
ALHA80118	H-6 chondrite	2.4	M-7	5(1)
ALHA80119	L-6 chondrite	33.7	O-7	5(1)
ALHA80120	L-6 chondrite	60.1	O-7	5(1)
ALHA80121	H-4 chondrite	39.1	H-9	5(1)
ALHA80122	H-6 chondrite	49.8	F-8	5(1)
ALHA80123	H-5 chondrite	27.8	F-9	5(1)
ALHA80124	H-5 chondrite	12.0	F-8	5(1)
ALHA80125	L-6 chondrite	139.2	O-7	5(1)
ALHA80126	H-6 chondrite	34.5	K-7	5(1)
ALHA80127	H-5 chondrite	47.5	E-6	5(1)
ALHA80128	H-4 chondrite	138.2	E-6	5(1)
ALHA80129	H-5 chondrite	93.4	E-6	5(1)
ALHA80130	H-6 chondrite	5.3	F-9	5(1)
ALHA80131	H-4 chondrite	19.8	F-9	5(1)
ALHA80132	H-5 chondrite	152.8	M-7	5(1)
ALHA80133	L-3 chondrite	3.6	F-10	5(1)
ALHA81001	eucrite (anomalous)	52.9	G-10	6(1)
ALHA81002	carbonaceous C2	14.0	B-8	6(1)
ALHA81003	carbonaceous C3V	10.1	G-6	6(1)
ALHA81006	eucrite (polymict)	254.9	F-6	6(1)
ALHA81007	eucrite (polymict)	163.5	F-6	6(1)
ALHA81008	eucrite (polymict)	43.8	F-10	6(1)
ALHA81009	eucrite	229.0	F-7	7(1)
ALHA81010	eucrite (polymict)	219.1	E-9	6(1)
ALHA81011	eucritic breccia	405.7	J-10	6(1)
ALHA81012	eucrite	36.7	G-7	6(1)
ALHA81014	iron	188.2	H-9	6(1)
ALHA81017	L-5 chondrite	1434.4	O-7	6(1)
ALHA81020	H-5 chondrite	1352.5	F-1	6(1)
ALHA81024	L-3 chondrite	797.7	D-6	6(1)
ALHA81025	L-3 chondrite	379.0	F-9	6(1)
ALHA81026	L-6 chondrite	515.5	E-8	6(1)
ALHA81027	L-6 chondrite	3835.3	F-6	6(1)
ALHA81028	L-6 chondrite	80.1	F-6	6(2)
ALHA81029	L-6 chondrite	153.0	F-7	6(2)
ALHA81030	L-3 chondrite	1851.6	G-9	6(1)
ALHA81031	L-3 chondrite	1594.9	G-9	6(1)
ALHA81032	L-3 chondrite	726.8	F-9	6(1)
ALHA81035	H-6 chondrite	256.1	F-6	6(1)
ALHA81037	H-6 chondrite	320.3	?	6(1)
ALHA81038	H-6 chondrite	229.0	F-6	6(1)
ALHA81039	H-5 chondrite	205.9	F-4	6(1)
ALHA81040	L-4 chondrite	194.5	E-6	6(1)
ALHA81053	L-3 chondrite	2.5	E-9	6(2)
ALHA81054	H-6 chondrite	2.2	E-9	6(2)
ALHA81055	H-6 chondrite	4.6	E-9	6(2)
ALHA81056	H-4 chondrite	1.4	E-9	6(2)
ALHA81057	H-4 chondrite	8.4	E-9	6(2)
ALHA81060	L-3 chondrite	28.3	G-10	6(2)
ALHA81061	L-3 chondrite	23.7	G-10	6(2)
ALHA81062	H-5 chondrite	0.5	B-8	6(2)
ALHA81063	H-5 chondrite	4.9	B-8	6(2)
ALHA81064	H-5 chondrite	191.0	F-9	6(2)
ALHA81065	L-3 chondrite	13.1	E-9	6(2)
ALHA81066	L-3 chondrite	8.7	E-9	6(2)
ALHA81067	H-5 chondrite	227.6	F-8	6(1)
ALHA81068	H-4 chondrite	23.7	E-9	6(2)
ALHA81069	L-3 chondrite	7.2	E-9	6(2)
ALHA81070	H-5 chondrite	3.7	D-8	6(2)

Listing of meteorites recovered from the Allan Hills Main Icefield and survey stations (continued)
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Meteorite Name	Classification	Weight (g)	Grid Cell	Newsletter
ALHA81071	H-5 chondrite	2.5	E-8	6(2)
ALHA81072	H-5 chondrite	3.2	F-10	6(2)
ALHA81073	H-4 chondrite	3.3	F-10	6(2)
ALHA81074	H-4 chondrite	8.0	F-10	6(2)
ALHA81075	H-5 chondrite	15.7	G-9	6(2)
ALHA81076	H-6 chondrite	10.3	G-9	6(2)
ALHA81077	H-5 chondrite	4.2	F-9	6(2)
ALHA81078	H-6 chondrite	5.9	F-9	6(2)
ALHA81079	H-6 chondrite	7.5	F-9	6(2)
ALHA81080	H-5 chondrite	16.7	F-9	6(2)
ALHA81081	H-5 chondrite	5.0	F-9	6(2)
ALHA81082	H-5 chondrite	5.9	F-10	6(2)
ALHA81083	H-5 chondrite	6.6	F-10	6(2)
ALHA81084	H-5 chondrite	15.7	F-10	6(2)
ALHA81085	L-3 chondrite	16.2	F-10	6(2)
ALHA81086	H-6 chondrite	5.7	F-10	6(2)
ALHA81087	L-3 chondrite	8.4	F-10	6(2)
ALHA81088	H-5 chondrite	3.8	F-10	6(2)
ALHA81089	H-5 chondrite	11.2	F-10	6(2)
ALHA81090	H-5 chondrite	9.5	F-10	6(2)
ALHA81091	H-5 chondrite	12.2	F-10	6(2)
ALHA81092	H-4 chondrite	15.6	F-10	6(2)
ALHA81093	H-6 chondrite	271.0	?	6(1)
ALHA81096	H-6 chondrite	83.0	C-8	6(2)
ALHA81097	H-4 chondrite	79.9	N-8	6(2)
ALHA81100	H-5 chondrite	154.6	?	6(2)
ALHA81101	ureilite	119.2	L-8	6(2)
ALHA81102	H-6 chondrite	196.0	G-10	6(1)
ALHA81105	H-4 chondrite	92.7	E-6	6(2)
ALHA81107	L-6 chondrite	139.6	O-7	6(2)
ALHA81108	H-5 chondrite	69.1	G-8	6(2)
ALHA81109	H-4 chondrite	1.1	E-8	6(2)
ALHA81110	H-5 chondrite	3.0	E-9	6(2)
ALHA81112	H-6 chondrite	150.3	E-6	6(2)
ALHA81114	H-4 chondrite	79.3	E-6	6(2)
ALHA81115	H-5 chondrite	154.9	D-6	6(2)
ALHA81116	H-5 chondrite	1.7	E-9	6(2)
ALHA81117	H-4 chondrite	32.9	G-10	6(2)
ALHA81118	H-5 chondrite	84.7	C-8	6(2)
ALHA81120	H-5 chondrite	13.8	G-9	6(2)
ALHA81121	L-3 chondrite	88.4	G-10	6(2)
ALHA81122	L-6 chondrite	20.9	G-10	6(2)
ALHA81124	H-5 chondrite	9.3	G-9	6(2)
ALHA81125	H-5 chondrite	10.2	E-9	6(2)
ALHA81126	H-5 chondrite	21.5	E-9	6(2)
ALHA81127	H-6 chondrite	15.4	G-10	6(2)
ALHA81128	H-5 chondrite	15.9	E-9	7(1)
ALHA81129	H-5 chondrite	31.6	F-8	7(1)
ALHA81130	H-5 chondrite	29.9	F-10	7(1)
ALHA81131	L-6 chondrite	12.9	F-7	7(1)
ALHA81132	H-5 chondrite	5.4	F-8	7(1)
ALHA81133	H-5 chondrite	20.7	F-10	7(1)
ALHA81134	H-6 chondrite	15.4	H-9	7(1)
ALHA81135	H-5 chondrite	9.5	F-10	7(1)
ALHA81136	H-5 chondrite	1.2	E-9	6(2)
ALHA81137	H-6 chondrite	9.4	F-10	7(1)
ALHA81138	H-5 chondrite	4.3	E-9	7(1)
ALHA81139	H-5 chondrite	7.1	E-8	7(1)
ALHA81140	H-4 chondrite	14.4	H-9	7(1)
ALHA81141	H-5 chondrite	1.5	E-9	7(1)
ALHA81142	H-4 chondrite	1.2	B-8	7(1)
ALHA81143	H-5 chondrite	12.5	D-8	7(1)
ALHA81144	H-5 chondrite	3.0	E-9	7(1)
ALHA81145	L-3 chondrite	21.1	F-7	7(1)

Listing of meteorites recovered from the Allan Hills Main Icefield and survey stations (continued)
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Meteorite Name	Classification	Weight (g)	Grid Cell	Newsletter
ALHA81146	H-6 chondrite	23.8	H-9	7(1)
ALHA81147	H-4 chondrite	1.7	F-10	7(1)
ALHA81148	H-5 chondrite	13.3	G-9	7(1)
ALHA81149	H-4 chondrite	8.8	E-9	7(1)
ALHA81150	L-6 chondrite	1.9	F-9	7(1)
ALHA81151	LL-5 chondrite	5.1	F-9	7(1)
ALHA81152	H-5 chondrite	10.3	E-8	7(1)
ALHA81153	L-5 chondrite	4.2	E-9	6(2)
ALHA81154	H-6 chondrite	1.1	E-8	6(2)
ALHA81155	H-5 chondrite	4.5	F-10	7(1)
ALHA81156	L-3 chondrite	19.7	F-10	7(1)
ALHA81157	H-4 chondrite	11.8	F-9	7(1)
ALHA81158	H-5 chondrite	2.4	E-9	6(2)
ALHA81159	L-6 chondrite	10.3	?	7(1)
ALHA81160	H-6 chondrite	11.7	I-9	7(1)
ALHA81162	L-3 chondrite	59.4	F-7	7(1)
ALHA81163	H-5 chondrite	82.2	G-10	7(1)
ALHA81164	H-5 chondrite	20.1	E-9	7(1)
ALHA81165	H-5 chondrite	6.3	B-8	7(1)
ALHA81166	H-5 chondrite	26.3	E-9	7(1)
ALHA81168	H-5 chondrite	8.2	E-8	7(1)
ALHA81169	H-5 chondrite	5.6	E-8	7(1)
ALHA81170	H-5 chondrite	59.0	G-7	7(1)
ALHA81171	H-5 chondrite	23.7	E-9	7(1)
ALHA81172	L-6 chondrite	33.4	G-9	7(1)
ALHA81173	H-5 chondrite	25.8	G-6	7(1)
ALHA81174	H chondrite	33.3	D-6	7(1)
ALHA81175	H-5 chondrite	13.2	H-9	7(1)
ALHA81176	H-5 chondrite	94.5	G-10	7(1)
ALHA81177	H-4 chondrite	17.3	F-10	7(1)
ALHA81178	H-5 chondrite	29.9	E-9	7(1)
ALHA81179	H-5 chondrite	13.7	I-9	7(1)
ALHA81180	H-6 chondrite	16.6	G-10	7(2)
ALHA81181	L-6 chondrite	15.0	G-10	7(2)
ALHA81182	H-5 chondrite	4.6	D-6	7(2)
ALHA81183	H-5 chondrite	104.2	C-7	7(2)
ALHA81184	L-4 chondrite	16.7	D-6	7(2)
ALHA81186	H-5 chondrite	22.7	H-9	7(2)
ALHA81187	achondrite (unique)	40.0	F-8	7(2)
ALHA81188	H-5 chondrite	8.7	B-8	7(2)
ALHA81189	E-4 chondrite	2.6	I-7	7(2)
ALHA81190	L-3 chondrite	48.3	G-10	7(2)
ALHA81191	L-3 chondrite	30.4	F-9	7(2)
ALHA81192	H-5 chondrite	8.9	C-8	7(2)
ALHA81193	H-6 chondrite	13.4	F-9	7(2)
ALHA81194	H-5 chondrite	17.0	E-9	7(2)
ALHA81195	H-5 chondrite	4.9	E-9	7(2)
ALHA81196	H-6 chondrite	9.4	B-8	7(2)
ALHA81198	L-5 chondrite	0.5	F-10	7(2)
ALHA81199	H-4 chondrite	16.0	E-8	7(2)
ALHA81200	H-4 chondrite	9.5	E-8	7(2)
ALHA81201	H-5 chondrite	6.5	E-8	7(2)
ALHA81202	H-5 chondrite	5.4	F-9	7(2)
ALHA81203	L-6 chondrite	3.8	F-10	7(2)
ALHA81204	H-6 chondrite	7.3	E-9	7(2)
ALHA81205	L-6 chondrite	2.8	F-9	7(2)
ALHA81206	H-4 chondrite	3.8	E-8	7(2)
ALHA81208	diogenite/mesosiderite	1.6	E-9	7(2)
ALHA81210	H-6 chondrite	0.6	E-9	8(1)
ALHA81211	H-5 chondrite	7.2	E-9	8(1)
ALHA81212	H-4 chondrite	11.5	D-7	8(1)
ALHA81213	H-5 chondrite	2.9	E-8	7(2)
ALHA81214	L-3 chondrite	4.4	E-9	7(2)
ALHA81215	H-5 chondrite	11.2	H-7	7(2)

Listing of meteorites recovered from the Allan Hills Main Icefield and survey stations (continued)
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Meteorite Name	Classification	Weight (g)	Grid Cell	Newsletter
ALHA81216	H-5 chondrite	2.4	B-8	8(1)
ALHA81217	L-6 chondrite	5.4	G-9	7(2)
ALHA81218	H-5 chondrite	5.5	E-9	7(2)
ALHA81219	H-5 chondrite	24.4	E-7	8(1)
ALHA81220	H-5 chondrite	3.5	E-8	8(1)
ALHA81223	H-6 chondrite	9.5	H-8	8(1)
ALHA81224	H-6 chondrite	13.6	E-8	8(1)
ALHA81225	H-6 chondrite	13.9	G-9	8(1)
ALHA81226	H-5 chondrite	2.9	E-8	8(1)
ALHA81227	H-5 chondrite	11.3	F-10	8(1)
ALHA81228	H-5 chondrite	7.7	F-9	8(1)
ALHA81229	L-3 chondrite	40.0	F-8	8(1)
ALHA81230	H-5 chondrite	12.5	E-9	8(1)
ALHA81231	H-4 chondrite	9.2	G-10	8(1)
ALHA81232	H-5 chondrite	4.6	E-9	8(1)
ALHA81233	H-5 chondrite	25.0	B-8	8(1)
ALHA81234	H-4 chondrite	4.7	E-9	8(1)
ALHA81235	L-6 chondrite	6.7	E-8	8(1)
ALHA81236	H-5 chondrite	40.9	G-8	8(1)
ALHA81237	H-5 chondrite	26.9	E-9	8(1)
ALHA81238	H-5 chondrite	24.1	G-10	8(1)
ALHA81239	H-5 chondrite	31.6	C-7	8(1)
ALHA81240	H-5 chondrite	41.3	F-6	8(1)
ALHA81242	H-5 chondrite	19.9	F-7	8(1)
ALHA81243	L-3 chondrite	15.0	F-9	8(1)
ALHA81244	H-5 chondrite	4.6	F-6	8(1)
ALHA81245	H-5 chondrite	3.8	E-9	8(1)
ALHA81246	H-5 chondrite	3.4	G-10	8(1)
ALHA81248	H-6 chondrite	4.9	E-9	8(1)
ALHA81249	H-5 chondrite	10.4	H-9	8(1)
ALHA81250	H-6 chondrite	16.9	F-10	8(1)
ALHA81251	LL-3 chondrite	158.0	D-8	6(2)
ALHA81252	H-5 chondrite	2.1	E-9	8(1)
ALHA81253	H-6 chondrite	10.2	E-9	8(1)
ALHA81254	H-6 chondrite	8.6	E-9	8(1)
ALHA81255	H-5 chondrite	11.5	F-9	8(1)
ALHA81256	H-5 chondrite	28.5	D-7	8(1)
ALHA81257	L-6 chondrite	28.7	B-8	8(1)
ALHA81259	L-3 chondrite	9.9	G-10	8(1)
ALHA81261	H(?) chondrite	11.8	F-9	8(1)
ALHA81262	L-6 chondrite	55.5	O-7	8(1)
ALHA81263	H-5 chondrite	6.0	F-8	8(1)
ALHA81265	H-5 chondrite	7.5	G-10	8(1)
ALHA81266	L-6 chondrite	12.3	N-7	8(1)
ALHA81268	H-6 chondrite	17.9	D-8	8(1)
ALHA81269	H-5 chondrite	4.7	E-9	8(1)
ALHA81270	H-5 chondrite	3.8	B-8	8(1)
ALHA81271	H-6 chondrite	27.6	G-10	8(1)
ALHA81272	L-3 chondrite	22.9	G-10	8(1)
ALHA81273	H-6 chondrite	42.8	H-8	8(1)
ALHA81274	H-5 chondrite	18.5	F-9	8(1)
ALHA81275	H-5 chondrite	11.1	G-9	8(1)
ALHA81276	H-5 chondrite	42.3	E-6	8(1)
ALHA81277	H-5 chondrite	6.6	F-9	8(1)
ALHA81278	L-6 chondrite	1.1	B-8	8(1)
ALHA81280	L-3 chondrite	54.9	G-10	8(1)
ALHA81281	H-5 chondrite	45.6	D-7	8(1)
ALHA81282	L-6 chondrite	31.1	F-10	8(1)
ALHA81283	H-5 chondrite	0.6	E-9	8(1)
ALHA81284	H-5 chondrite	9.9	E-8	8(1)
ALHA81285	LL-6 chondrite	20.0	B-8	8(1)
ALHA81286	H-5 chondrite	27.9	F-9	8(1)
ALHA81288	H-6 chondrite	19.8	F-10	8(1)
ALHA81289	L-6 chondrite	4.2	E-9	8(1)

Listing of meteorites recovered from the Allan Hills Main Icefield and survey stations (continued)
(1979, 1980, 1981, 1983, 1984, 1985, and 1986 collections).

Meteorite Name	Classification	Weight (g)	Grid Cell	Newsletter
ALHA81290	H-4 chondrite	1.5	E-8	8(1)
ALHA81291	H-6 chondrite	3.9	F-10	8(1)
ALHA81292	L-3 chondrite	12.9	F-9	8(1)
ALHA81293	H-5 chondrite	2.0	E-8	8(1)
ALHA81294	H-5 chondrite	8.6	E-8	8(1)
ALHA81296	H-5 chondrite	12.7	F-10	8(1)
ALHA81297	H-5 chondrite	20.1	E-8	8(1)
ALHA81298	H-6 chondrite	16.2	H-9	8(1)
ALHA81299	L-3 chondrite	0.5	E-9	8(1)
ALHA81300	H-5 chondrite	10.3	G-7	8(1)
ALHA81301	H-5 chondrite	12.5	F-7	8(1)
ALHA81302	H-5 chondrite	4.2	F-10	8(1)
ALHA81303	H-6 chondrite	3.7	E-8	8(1)
ALHA81304	L-6 chondrite	42.1	C-7	8(1)
ALHA81305	H-5 chondrite	1.1	D-6	8(1)
ALHA81306	H-5 chondrite	7.1	E-9	8(1)
ALHA81307	L-6 chondrite	56.9	F-7	8(1)
ALHA81308	H-5 chondrite	18.7	L-9	8(1)
ALHA81309	H-4 chondrite	0.6	E-9	8(1)
ALHA81310	H-6 chondrite	0.7	F-10	8(1)
ALHA81311	L-6 chondrite	0.9	E-9	8(1)
ALHA81312	carbonaceous C2	0.7	E-9	7(1)
ALHA81313	shergottite (?)	0.5	E-9	8(1)
ALHA81314	H-5 chondrite	2.9	E-9	8(1)
ALHA81315	H(?) chondrite	2.5	E-9	8(1)
ALHA81317	H-6 chondrite	0.4	F-10	9(1)
ALH 83003	H-5 chondrite	321.8	H-10	9(2)
ALH 83005	H-5 chondrite	227.9	L-10	9(2)
ALH 83007	L-3 chondrite	285.0	N-8	9(1)
ALH 83008	L-3 chondrite	272.0	F-9	9(1)
ALH 83011	L-5 chondrite	213.3	F-9	9(1)
ALH 83013	H-6 chondrite	246.3	M-8	9(1)
ALH 83021	L-6 chondrite	42.4	F-10	10(2)
ALH 83025	H-5 chondrite	77.8	F-9	10(2)
ALH 83028	H-6 chondrite	16.0	I-9	10(2)
ALH 83030	H-5 chondrite	48.7	F-9	10(2)
ALH 83031	H-5 chondrite	10.4	F-10	10(2)
ALH 83033	L-6 chondrite	20.7	F-9	10(2)
ALH 83034	H-5 chondrite	6.5	G-10	10(2)
ALH 83036	H-5 chondrite	24.3	F-10	10(2)
ALH 83038	L-3 chondrite	86.5	I-9	10(2)
ALH 83039	H-5 chondrite	6.3	F-10	10(2)
ALH 83040	H-5 chondrite	77.9	F-9	10(2)
ALH 83047	H-5 chondrite	20.0	G-10	9(3)
ALH 83048	L-5 chondrite	2.3	F-10	9(3)
ALH 83049	H-5 chondrite	6.1	F-9	9(3)
ALH 83050	H-6 chondrite	9.7	F-9	9(3)
ALH 83051	H-5 chondrite	16.5	?	9(3)
ALH 83055	H-5 chondrite	18.4	G-10	10(2)
ALH 83057	H-5 chondrite	62.9	F-10	10(2)
ALH 83060	H-5 chondrite	8.8	K-9	10(2)
ALH 83063	L-6 chondrite	16.9	O-7	10(2)
ALH 83067	L-6 chondrite	95.8	K-9	9(1)
ALH 83069	L-5 chondrite	78.2	G-3	9(1)
ALH 83071	H-6 chondrite	4.9	G-10	10(2)
ALH 84056	L-6 chondrite	2140.3	?	9(1)
ALH 84071	H-6 chondrite	797.7	?	9(1)
ALH 84101	H-6 chondrite	220.9 ?	10(1)	
ALH 84111	H-5 chondrite	131.5	K-7	9(3)
ALH 84118	H-6 chondrite	113.7	I-9	10(1)
ALH 84122	LL-6 chondrite	81.4	D-7	10(2)
ALH 84130	L-6 chondrite	45.1	H-9	10(2)
ALH 84156	H-5 chondrite	27.8	E-9	11(2)
ALH 84165	iron-octahedrite	94.7	J-3	9(1)

Listing of meteorites recovered from the Allan Hills Main Icefield and survey stations (continued)
(1979, 1980, 1981, 1983, 1984, 1985, and 1986 collections).

Meteorite Name	Classification	Weight (g)	Grid Cell	Newsletter
ALH 84166	L-6 chondrite	39.0	G-9	10(2)
ALH 84167	H-5 chondrite	150.7	F-9	9(3)
ALH 84174	L-6 chondrite	32.2	J-6	10(2)
ALH 84176	H-6 chondrite	4.6	F-9	11(1)
ALH 84180	H-6 chondrite	47.4	F-9	11(1)
ALH 84183	H-5 chondrite	27.8	E-8	11(1)
ALH 84186	H-6 chondrite	19.6	B-8	10(2)
ALH 84190	achondrite (unique)	7.9	F-9	11(1)
ALH 84192	H-5 chondrite	4.2	D-8	11(1)
ALH 84194	H-5 chondrite	3.9	I-1	11(1)
ALH 84195	L-4 chondrite	2.1	G-9	11(1)
ALH 84196	H-5 chondrite	10.2	D-8	11(1)
ALH 84209	L-5 chondrite	5.5	G-9	11(1)
ALH 84213	H-5 chondrite	6.7	D-7	11(1)
ALH 84215	H-6 chondrite	9.2	D-8	11(1)
ALH 84222	H-4 chondrite	9.9	D-8	11(1)
ALH 84224	H-6 chondrite	7.2	F-9	11(1)
ALH 84225	H-5 chondrite	8.7	B-8	11(1)
ALH 84226	H-5 chondrite	27.6	D-7	11(1)
ALH 84228	H-5 chondrite	9.8	E-8	11(1)
ALH 84236	H-5 chondrite	32.3	H-8	9(3)
ALH 84237	H-5 chondrite	7.5	G-9	11(1)
ALH 84239	H-5 chondrite	14.7	E-9	11(1)
ALH 84243	H-6 chondrite	48.9	?	10(2)
ALH 84248	H-5 chondrite	4.9	F-10	11(1)
ALH 84260	H-5 chondrite	14.6	J-4	11(1)
ALH 85035	LL-6 chondrite	420.1	K-10	10(1)
ALH 85037	H-6 chondrite	141.2	M-9	10(2)
ALH 85041	H-6 chondrite	168.0	G-9	10(2)
ALH 85044	H-6 chondrite	104.8	G-9	10(2)
ALH 85044	H-6 chondrite	104.8	G-9	10(2)
ALH 85048	H-5 chondrite	16.9	M-9	10(2)
ALH 85067	H-5 chondrite	1.3	D-8	11(2)
ALH 85068	H-5 chondrite	3.6	E-8	11(2)
ALH 85076	L-6 chondrite	78.3	E-8	10(2)
ALH 85088	H-5 chondrite	0.4	E-8	12(1)
ALH 85094	H-6 chondrite	8.7	F-9	10(2)
ALH 85109	H-6 chondrite	20.7	G-10	10(2)
ALH 85110	H-5 chondrite	22.2	?	12(1)
ALH 85118	L-5 chondrite	48.0	N-9	10(2)
ALH 85122	H-5 chondrite	61.2	?	12(1)
ALH 85123	L-5 chondrite	15.3	M-9	10(2)
ALH 85144	H-5 chondrite	18.3	F-9	12(1)
ALH 85153	H-4 chondrite	0.4	D-8	10(2)
ALH 86600	L-6 chondrite	411.1	F-9	11(1)
ALH 86601	L-6 chondrite	309.0	?	11(1)
ALH 86602	H-4 chondrite	264.5	J-10	11(1)
ALH 86603	H-5 chondrite	104.5	J-10	11(2)
ALH 86604	L-6 chondrite	12.8	G-9	11(2)
ALH 86605	L-6 chondrite	12.3	H-7	11(2)
ALH 86606	H-5 chondrite	4.5	G-10	11(2)
ALH 86607	H-6 chondrite	2.9	J-10	11(2)
ALH 86608	L-6 chondrite	9.8	J-10	11(2)
ALH 86609	J-6 chondrite	7.8	J-10	11(2)
ALH 86610	L-5 chondrite	0.8	J-10	11(2)
ALH 86611	H-5 chondrite	9.3	J-10	11(2)
ALH 86612	H-5 chondrite	1.5	J-10	11(2)
station 8			G-10	
station 9			H-11	
station 10			H-9	
station 11			G-8	
station 12			H-7	
station 13			G-7	
station 14			G-7	

Listing of meteorites recovered from the Allan Hills Main Icefield and survey stations (continued)
(1979, 1980, 1981, 1983, 1984, 1985, and 1986 collections).

Meteorite Name	Classification	Weight (g)	Grid Cell	Newsletter
station 15			H-6	
station 16			F-5	
station 17			H-3	
station 18			G-2	
station 19			G-2	
station 20			F-1	
station A			F-8	
station B			F-8	
station C			E-8	
station D			F-9	
station XX			L-9	

Question mark indicates meteorite position is not documented or is not located in map area. See text.

ALLAN HILLS NEAR WESTERN ICEFIELD METEORITE LOCATION MAP

1986 and 1987 Editions Explanatory Text with Meteorite Listing for the 1977, 1981, 1983, and 1984 Collections

The Allan Hills Near Western Icefield (76°44'S 158°48'E) lies approximately 12 km west of Main Icefield (Fig. 7). This northwest trending icefield is nearly 14 km long and up to 4 km wide. All areas of exposed ice have been systematically searched and outliers and peripheries visited on a reconnaissance basis. Figure 7 shows the location of two slope profiles diagrammed in Fig. 8.

During the 1977-1978 season, 21 meteorites were recovered from the Near Western Icefield. The location map published by Yanai (1984) gives the names and indicates the locations of these specimens. Since these specimens are not referenced to our survey base station network, they are not included on our map. The positions of the 124 meteorites recovered from the Near Western Icefield during the 1981-1982, 1983-1984, and 1984-1985 seasons are plotted on the Allan Hills Near Western Icefield Meteorite Location Map. A reduced version of the map is given in Fig. 9.

Crude location methods were used during the 1981-1982 season. Most of the specimens found in subsequent seasons were surveyed using the more precise theodolite/EDM system. A preliminary location map was generated using survey data. The data from the 1981-1982 season were then "fitted" to the preliminary map and UTM

coordinates scaled off, entered in the database, and a new location map was generated. Therefore, the map accurately depicts the relative locations of meteorites found in the same season, but somewhat less precisely when locations of specimens from different seasons are compared. The map of the Allan Hills Near Western Icefield is plotted at a scale of 1:12,500. The grid crosses are spaced 1 km apart.

Two editions of the location map have been produced. The most recent version has minor formatting and cosmetic changes and the addition of ALHA81316 to the map and the database.

The listing gives all meteorites recovered from the Allan Hills Near Western Icefield. Following the listing, Table 4 shows the different types of meteorites from the icefield and their numbers.

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REFERENCES

Yanai K. (1984) Sheet 1 - Allan Hills. *Locality Map Series of Antarctic Meteorites*. National Institute of Polar Research, Tokyo, Japan.

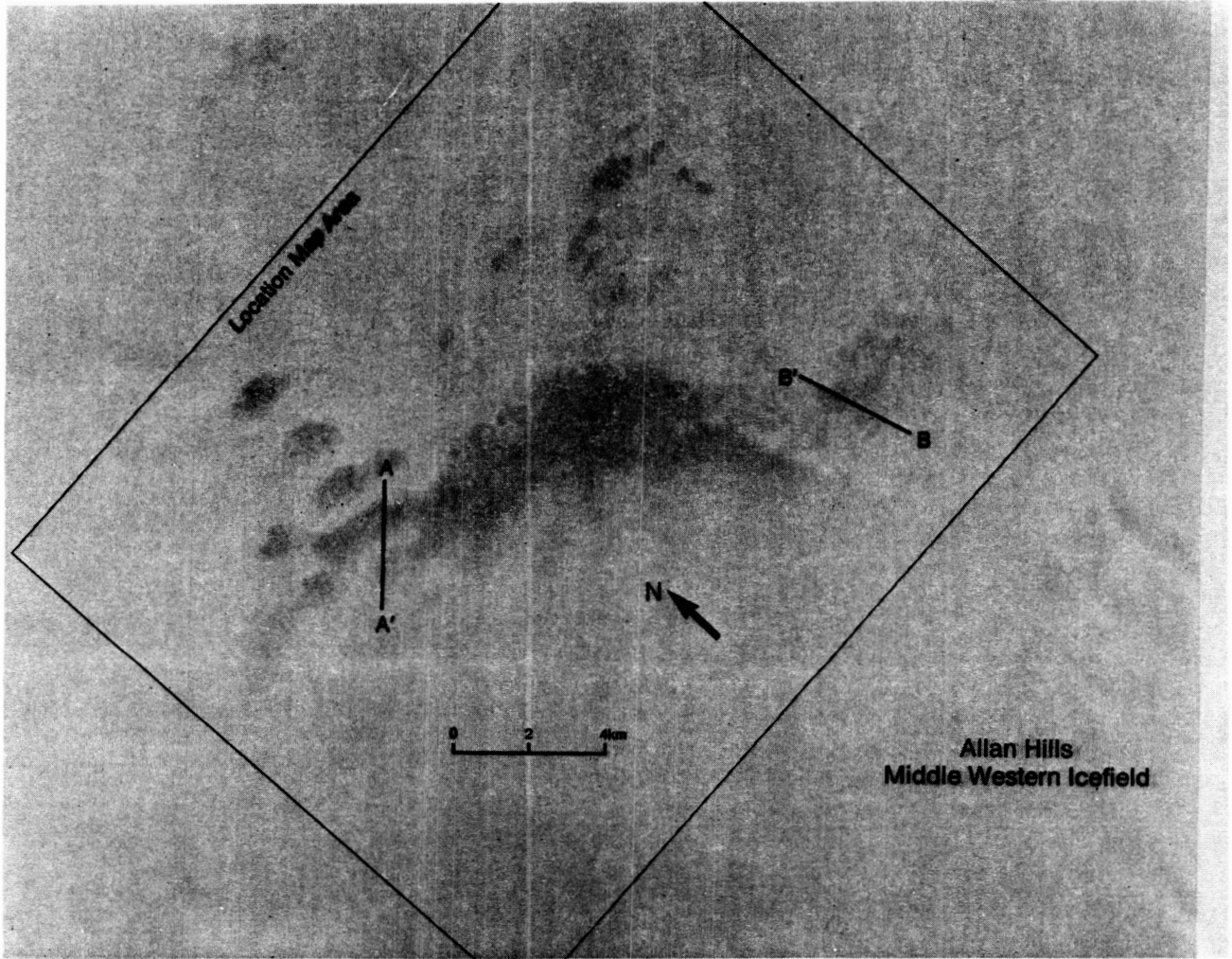


Fig. 10. Enlarged portion of satellite image showing the Allan Hills Middle Western Icefield and area covered by meteorite location map. Locations of slope profile sections are also shown.

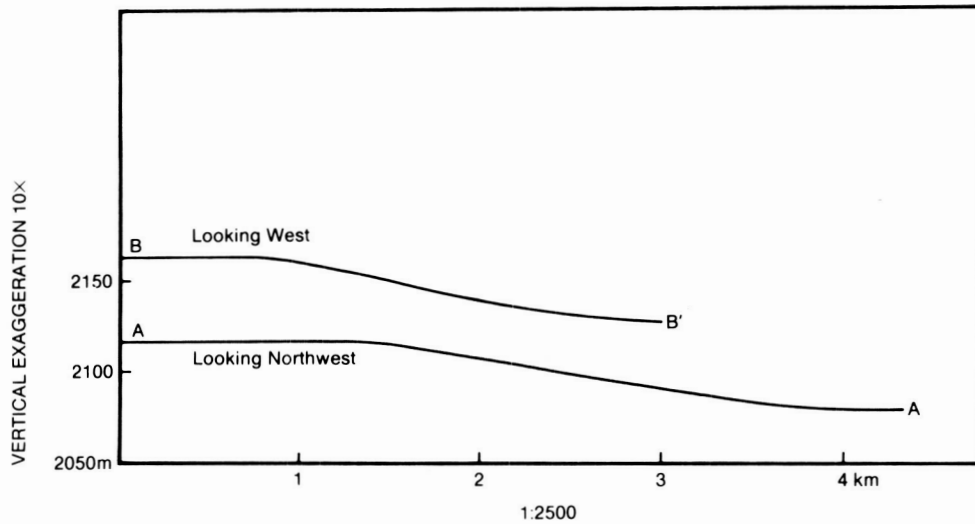


Fig. 11. Slope profiles of the Allan Hills Middle Western Icefield.

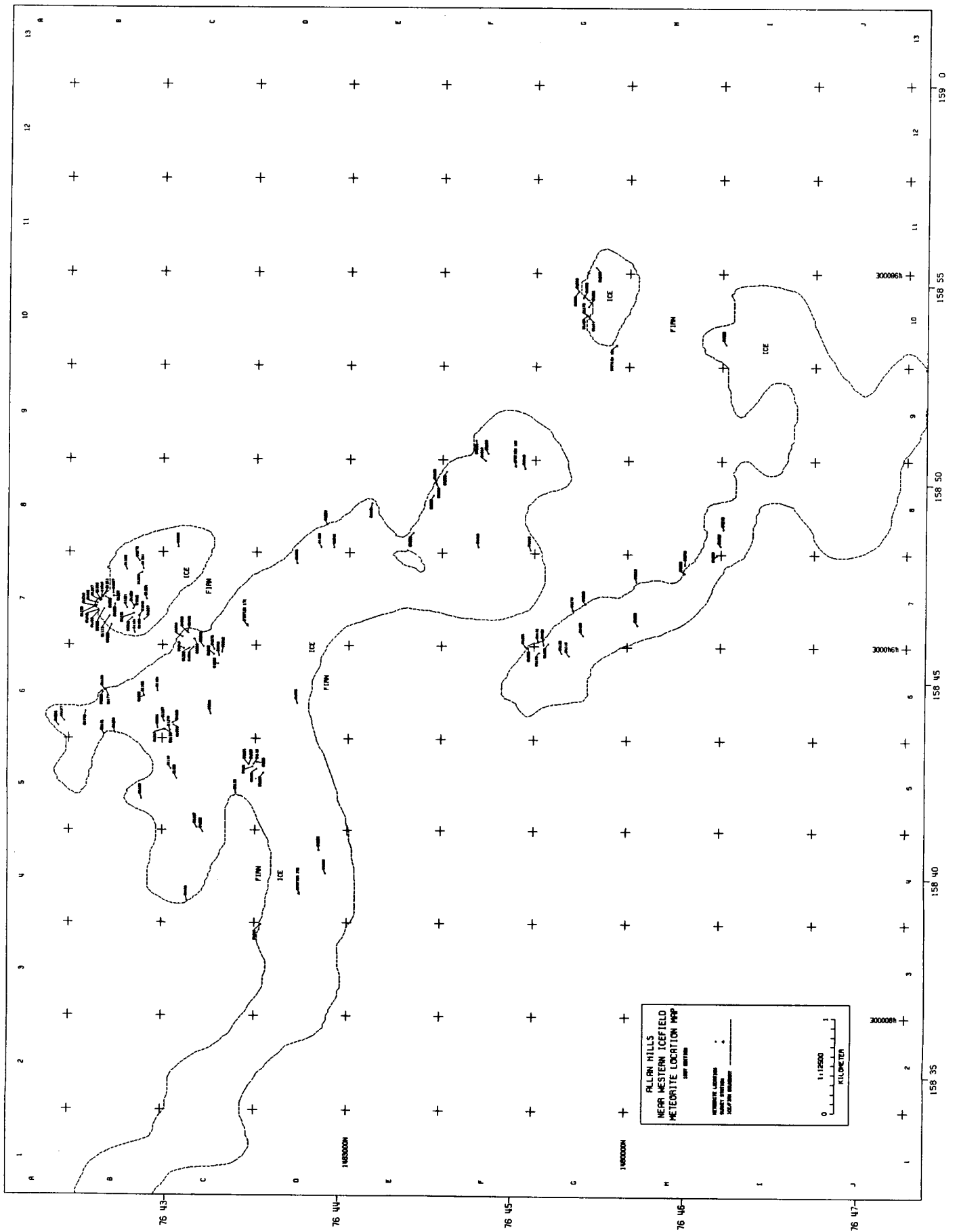


Fig. 9. Reduced example of the Allan Hills Near Western Icefield Meteorite Location Map

TABLE 4. Types of meteorites recovered from the Allan Hills Near Western Icefield (1977, 1981, 1983, and 1984 collections).

Number of Specimens	Classification
1	aubrite
2	carbonaceous C2
1	carbonaceous C3O
2	carbonaceous C3V
1	E-3 chondrite
6	E-4 chondrite
1	EH-4 chondrite
34	H-4 chondrite
1	H-4,5 chondrite
54	H-5 chondrite
11	H-6 chondrite
2	iron
2	L-4 chondrite
2	L-5 chondrite
16	L-6 chondrite
6	LL-6 chondrite
3	mesosiderite

Listing of meteorites recovered from the Allan Hills Near Western Icefield and survey stations
(1977, 1981, 1983, and 1984 collections).

Meteorite Name	Classification	Weight (g)	Grid Cell	Newsletter
ALHA77003	carbonaceous C3O	779.6	•	4(2)
ALHA77004	H-4 chondrite	2230.0	•	4(1)
ALHA77184	H-5 chondrite	127.6	•	6(2)
ALHA77186	H-5 chondrite	122.4	•	6(2)
ALHA77187	H-5 chondrite	52.2	•	6(2)
ALHA77188	H-5 chondrite	109.0	•	6(2)
ALHA77190	H-4 chondrite	387.1	•	4(1)
ALHA77191	H-4 chondrite	642.2	•	4(1)
ALHA77192	H-4 chondrite	845.3	•	4(1)
ALHA77208	H-4 chondrite	1733.0	•	4(1)
ALHA77219	mesosiderite	637.1	•	4(1)
ALHA77220	H-5 chondrite	69.1	•	6(2)
ALHA77221	H-4 chondrite	229.2	•	4(1)
ALHA77222	H-4 chondrite	125.4	•	6(2)
ALHA77223	H-4 chondrite	207.9	•	4(1)
ALHA77224	H-4 chondrite	786.9	•	4(1)
ALHA77225	H-4 chondrite	5878.0	•	4(1)
ALHA77226	H-4 chondrite	15323.0	•	4(1)
ALHA77232	H-4 chondrite	6494.3	•	4(1)
ALHA77233	H-4 chondrite	4087.0	•	4(1)
ALHA77295	EH-4 chondrite	141.3	•	6(2)
ALHA81013	iron	17727.0	F-8	6(1)
ALHA81015	H-5 chondrite	5489.0	B-7	6(1)
ALHA81016	L-6 chondrite	3850.2	D-8	6(1)
ALHA81033	H-5 chondrite	242.4	C-6	6(1)
ALHA81034	H-5 chondrite	254.9	D-7	6(1)
ALHA81036	H-5 chondrite	252.1	C-5	6(1)
ALHA81041	H-4 chondrite	728.8	C-6	6(2)
ALHA81042	H-5 chondrite	534.4	C-6	6(1)
ALHA81043	H-4 chondrite	106.0	C-6	6(2)
ALHA81044	H-4 chondrite	386.8	C-6	6(2)
ALHA81045	H-4 chondrite	90.2	B-7	6(2)
ALHA81046	H-4 chondrite	16.6	B-7	6(2)
ALHA81047	H-4 chondrite	81.2	B-7	6(2)
ALHA81048	H-4 chondrite	190.6	C-6	6(2)
ALHA81049	H-4 chondrite	8.5	B-7	6(2)
ALHA81050	H-4 chondrite	25.7	B-7	6(2)
ALHA81051	H-4 chondrite	43.0	B-7	6(2)
ALHA81052	H-4 chondrite	28.7	C-8	6(2)
ALHA81058	H-4 chondrite	66.2	C-6	6(2)
ALHA81059	mesosiderite	539.5	C-6	6(2)
ALHA81094	H-6 chondrite	152.0	B-7	6(2)
ALHA81095	H-4 chondrite	58.8	B-7	6(2)
ALHA81098	mesosiderite	70.9	B-6	6(2)
ALHA81099	L-6 chondrite	151.6	D-8	6(2)
ALHA81104	H-4 chondrite	183.8	B-6	6(2)
ALHA81106	L-6 chondrite	48.3	C-6	6(2)
ALHA81113	H-5 chondrite	111.1	B-7	6(2)
ALHA81119	L-4 chondrite	107.4	C-5	6(2)
ALHA81123	LL-6 chondrite	2.0	B-7	6(2)
ALHA81161	H-5 chondrite	122.2	B-7	7(1)
ALHA81185	LL-6 chondrite	64.9	B-6	7(2)
ALHA81197	H-5 chondrite	67.7	C-6	7(2)
ALHA81207	H-5 chondrite	14.1	B-7	7(2)
ALHA81209	H-5 chondrite	13.9	B-7	7(2)
ALHA81221	L-6 chondrite	9.2	B-7	8(1)
ALHA81241	H-5 chondrite	34.2	B-7	8(1)
ALHA81247	L-6 chondrite	104.2	C-6	8(1)
ALHA81258	carbonaceous C3V	1.1	B-7	8(1)
ALHA81267	H-4 chondrite	26.8	B-7	8(1)
ALHA81279	H-4 chondrite	27.1	C-6	8(1)
ALHA81287	H-5 chondrite	77.6	B-7	8(1)
ALHA81295	H-5 chondrite	105.1	B-7	8(1)
ALHA81316	LL-4 chondrite	0.7	C-6	9(1)

Listing of meteorites recovered from the Allan Hills Near Western Icefield and survey stations (continued)
(1977, 1981, 1983, and 1984 collections).

Meteorite Name	Classification	Weight (g)	Grid Cell	Newsletter
ALH 83001	L-4 chondrite	1568.6	C-6	8(1)
ALH 83002	L-5 chondrite	367.1	B-7	9(2)
ALH 83006	H-5 chondrite	230.2	C-7	9(2)
ALH 83012	H-5 chondrite	202.7	B-7	10(1)
ALH 83053	H-5 chondrite	63.2	C-7	9(3)
ALH 83061	H-5 chondrite	33.6	B-6	10(2)
ALH 83062	H-5 chondrite	76.9	C-7	10(2)
ALH 83064	H-5 chondrite	12.4	C-6	10(2)
ALH 83065	H-5 chondrite	53.6	B-7	10(2)
ALH 83066	H-5 chondrite	45.9	C-7	10(2)
ALH 83073	H-5 chondrite	49.2	B-7	10(2)
ALH 84002	L-6 chondrite	7554.0	E-8	9(2)
ALH 84003	H-5 chondrite	3088.7	D-4	9(2)
ALH 84004	H-4 chondrite	9000.0	D-4	8(2)
ALH 84006	H-4,5 chondrite	16000.0	H-7	8(2)
ALH 84022	aubrite	12.5	H-8	9(2)
ALH 84028	carbonaceous C3V	735.9	I-10	8(2)
ALH 84033	carbonaceous C2	60.4	F-8	8(2)
ALH 84054	carbonaceous C2	19.4	E-8	9(1)
ALH 84055	H-5 chondrite	6900.5	D-6	9(1)
ALH 84059	H-4 chondrite	856.9	H-7	9(1)
ALH 84066	L-6 chondrite	355.8	D-3	9(1)
ALH 84067	H-5 chondrite	391.2	C-5	9(1)
ALH 84069	H-5 chondrite	1136.3	F-8	9(2)
ALH 84075	H-5 chondrite	788.6	C-6	9(3)
ALH 84083	H-6 chondrite	419.7	H-7	9(3)
ALH 84085	H-5 chondrite	554.2	D-5	9(3)
ALH 84100	H-5 chondrite	110.3	E-8	9(3)
ALH 84103	H-4 chondrite	137.5	G-7	10(1)
ALH 84105	H-6 chondrite	260.9	G-6	10(1)
ALH 84109	H-6 chondrite	245.9	G-7	10(1)
ALH 84110	H-6 chondrite	318.5	G-6	10(1)
ALH 84113	H-6 chondrite	212.1	F-8	10(1)
ALH 84121	H-5 chondrite	141.4	C-5	11(2)
ALH 84123	LL-6 chondrite	96.6	E-8	10(2)
ALH 84124	H-5 chondrite	114.5	C-5	10(1)
ALH 84125	LL-6 chondrite	76.4	E-8	10(2)
ALH 84127	L-6 chondrite	83.8	A-6	10(2)
ALH 84128	H-5 chondrite	2.1	B-6	11(2)
ALH 84131	H-5 chondrite	107.9	D-5	9(3)
ALH 84137	H-5 chondrite	145.4	D-5	9(3)
ALH 84138	H-5 chondrite	20.2	B-7	9(3)
ALH 84139	H-5 chondrite	157.1	G-6	9(3)
ALH 84143	L-6 chondrite	74.3	F-8	10(2)
ALH 84146	H-5 chondrite	33.2	B-6	11(2)
ALH 84148	H-5 chondrite	168.4	C-5	10(1)
ALH 84149	H-5 chondrite	12.0	B-7	11(2)
ALH 84151	H-6 chondrite	112.4	G-7	9(3)
ALH 84159	H-6 chondrite	100.8	C-5	10(1)
ALH 84161	H-5 chondrite	82.9	B-6	11(2)
ALH 84162	H-5 chondrite	42.3	B-7	11(2)
ALH 84168	LL-6 chondrite	14.2	C-4	9(3)
ALH 84169	L-6 chondrite	98.4	F-9	11(2)
ALH 84170	E-3 chondrite	39.2	G-7	9(3)
ALH 84172	H-5 chondrite	3.0	G-10	11(2)
ALH 84177	L-5 chondrite	7.3	B-6	9(3)
ALH 84181	L-6 chondrite	32.9	G-10	10(2)
ALH 84184	H-5 chondrite	42.1	F-9	9(3)
ALH 84187	H-6 chondrite	25.9	C-5	11(1)
ALH 84188	E-4 chondrite	3.1	G-7	9(3)
ALH 84189	H-6 chondrite	8.7	B-5	10(2)
ALH 84197	L-6 chondrite	8.2	G-10	10(2)
ALH 84200	E-4 chondrite	8.5	G-7	11(1)
ALH 84201	H-5 chondrite	6.3	G-10	11(1)

Listing of meteorites recovered from the Allan Hills Near Western Icefield and survey stations (continued)
(1977, 1981, 1983, and 1984 collections).

Meteorite Name	Classification	Weight (g)	Grid Cell	Newsletter
ALH 84202	H-5 chondrite	87.5	C-6	11(1)
ALH 84206	E-4 chondrite	15.1	F-6	9(3)
ALH 84210	L-6 chondrite	8.8	I-8	10(2)
ALH 84212	L-6 chondrite	7.1	H-7	10(2)
ALH 84220	E-4 chondrite	8.4	G-10	11(1)
ALH 84227	H-5 chondrite	12.1	B-7	9(3)
ALH 84229	L-6 chondrite	6.9	D-8	10(2)
ALH 84230	H-4 chondrite	2.4	G-10	9(3)
ALH 84232	H-4 chondrite	9.9	B-6	11(1)
ALH 84233	iron	13.6	B-6	10(2)
ALH 84235	E-4 chondrite	6.0	F-6	11(1)
ALH 84240	H-5 chondrite	25.9	H-7	11(1)
ALH 84250	E-4 chondrite	10.0	G-10	9(3)
ALH 84256	L-6 chondrite	3.0	A-6	10(2)
ALH 84259	H-5 chondrite	23.1	B-7	11(1)
ALH 84262	H-6 chondrite	15.3	C-4	9(3)
ALH 84263	H-5 chondrite	4.6	G-11	11(1)
station 170			D-4	
station 171			C-7	
station 190			F-8	
station 191			G-10	

*The locations of the meteorites collected in 1977-1978 can be found on the map published by Yanai (1984).

ALLAN HILLS MIDDLE WESTERN ICEFIELD METEORITE LOCATION MAP

1986 and 1987 Editions Explanatory Text with Meteorite Listing for the 1981, 1983, and 1984 Collections

The Allan Hills Middle Western Icefield (76°50'S 158°26'E) lies approximately 25 km southwest of the Main Icefield (Fig. 2). This northwest-trending icefield is nearly 20 km long and up to 3.5 km wide. Approximately 30 sq km of ice are exposed. The entire bare ice area has been systematically searched. Figure 10 shows the location of two slope profiles diagrammed in Fig. 11.

Five meteorites were recovered from the Middle Western Icefield on a helicopter reconnaissance search during the 1978-1979 season. No specimen field number or location information was recorded for these. The positions of the 80 meteorites recovered from the Middle Western Icefield during the 1981-1982, 1983-1984, and 1984-1985 seasons are plotted on the Allan Hills Middle Western Icefield Meteorite Location Map. A reduced scale version of the map is given in Fig. 12, and Fig. 10 shows the area covered by the map.

Most of the meteorite locations from the Middle Western Icefield were surveyed using the theodolite/EDM system.

Thus, the relative locations of specimens found and surveyed in different seasons are precisely shown. The map of the Allan Hills Middle Western Icefield is plotted at a scale of 1:25,000. The grid crosses are spaced 2 km apart.

Two editions of the Middle Western Icefield Map have been produced. The second, or 1987, edition has only minor formatting and cosmetic enhancements and no additions or deletions of meteorite locations. A listing of all specimens found on the Middle Western Icefield, with the exception of the 1978-1979 specimens, follows. The types of meteorites and their numbers are given in Table 5.

Acknowledgments. We thank I. Whillans (1981-1982); R. Fudali, A. C. Hitch, K. Nishiizumi, P. Pellas, L. Schultz, and P. Sipiera (1983-1984); C. King-Frazier, S. Sandford, R. Score, C. Thompson, and R. Walker (1984-1985) for their contributions to the Allan Hills Middle Western Icefield Meteorite Location Map.

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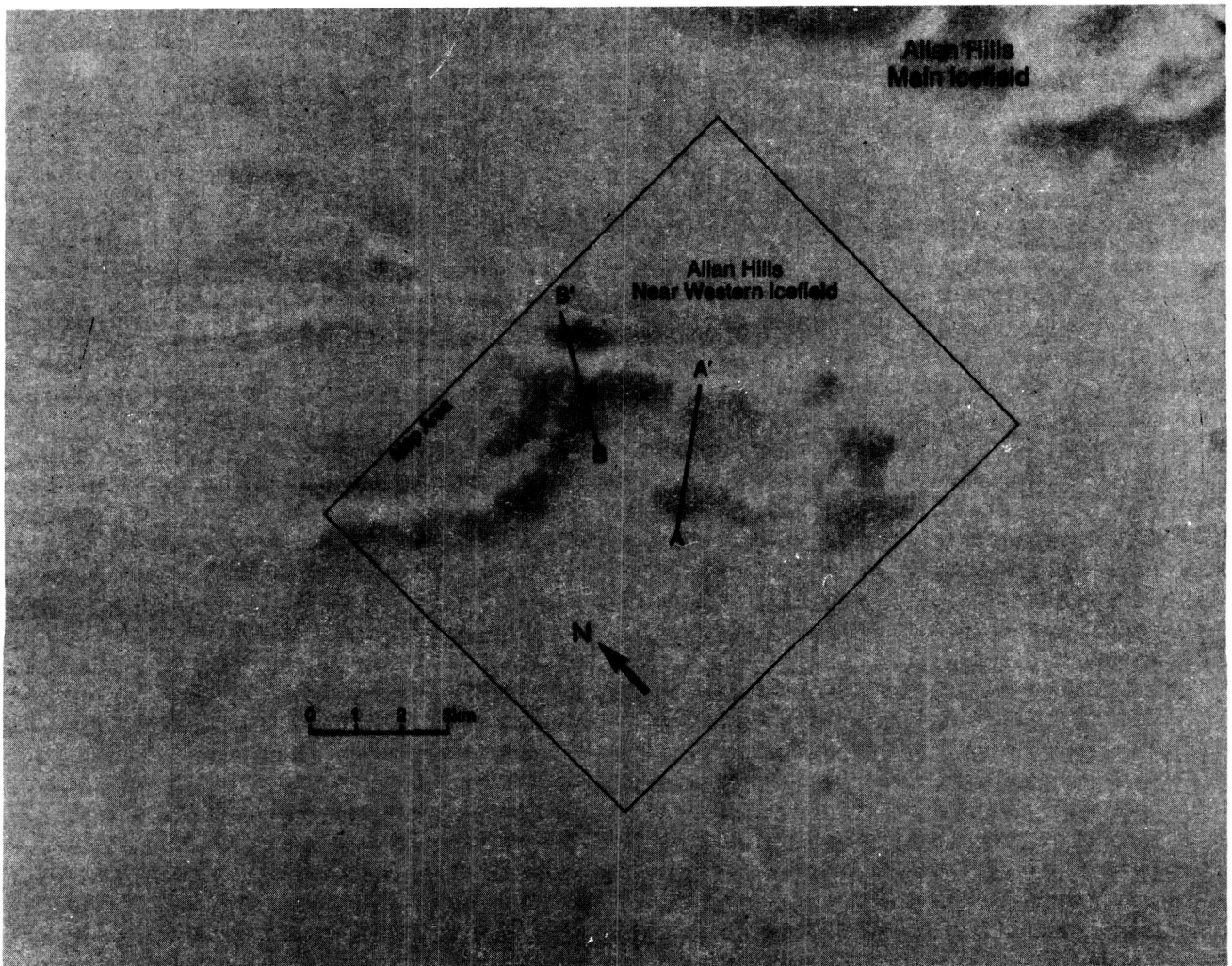


Fig. 7. Enlarged portion of satellite image showing the Allan Hills Near Western Icefield and area covered by meteorite location map. Locations of slope profile sections are also shown.

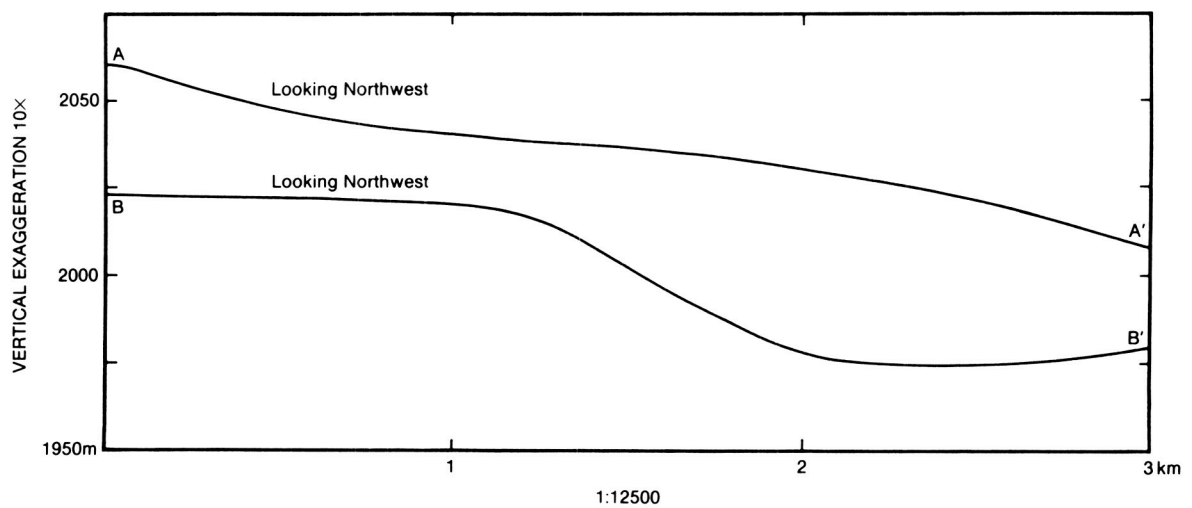


Fig. 8. Slope profiles of the Allan Hills Near Western Icefield.

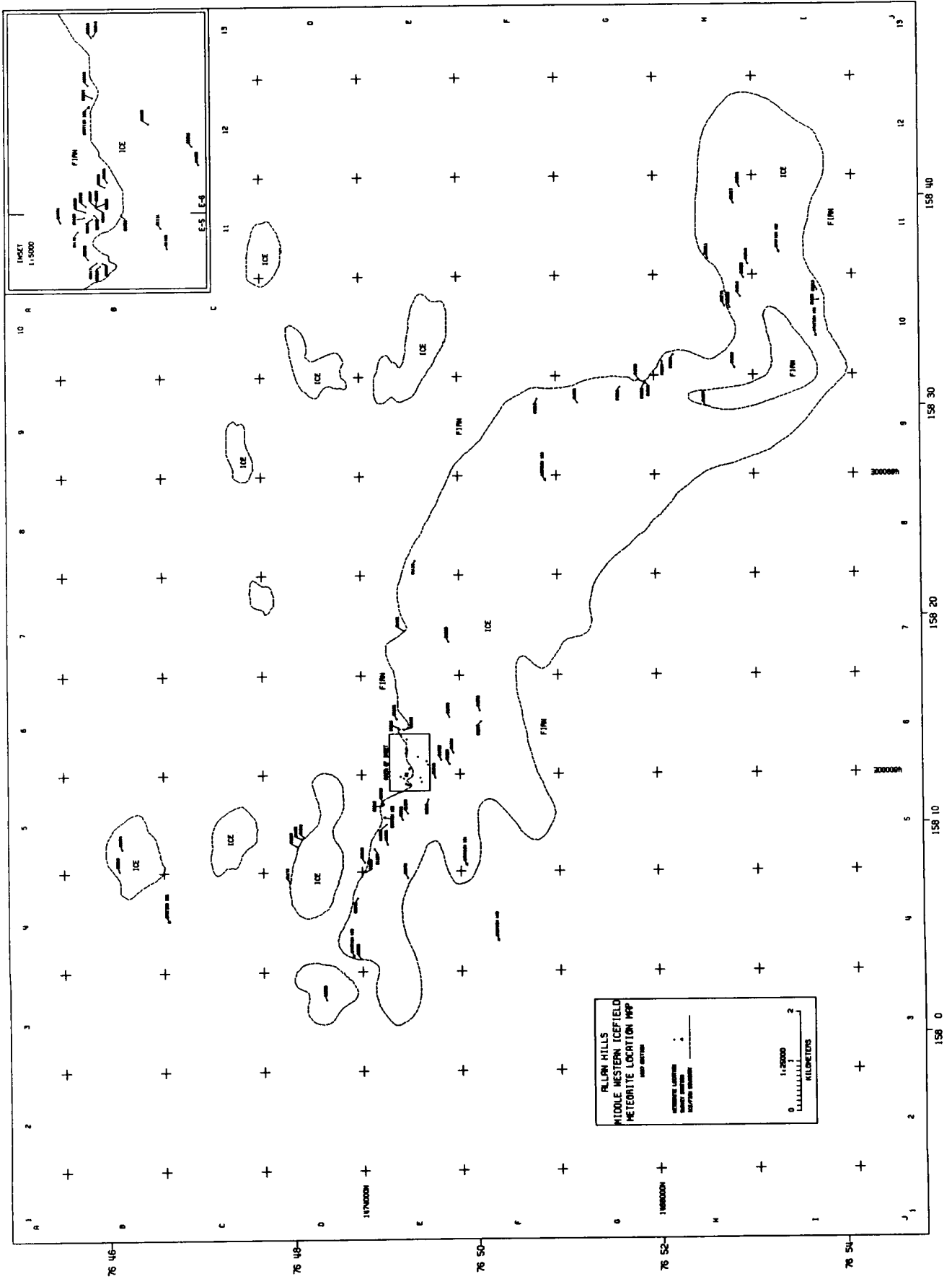


Fig. 12. Reduced example of the Allan Hills Middle Western Icefield Meteorite Location Map.

TABLE 5. Types of meteorites recovered from the Allan Hills Middle Western Icefield (1981, 1983, and 1984 collections).

Number of Specimens	Classification
1	anorthositic breccia
19	aubrite
3	carbonaceous C2
1	carbonaceous C3O
1	carbonaceous C4
3	E-6 chondrite
1	H-3 chondrite
2	H-4 chondrite
16	H-5 chondrite
6	H-6 chondrite
2	L-3 chondrite
1	L-4 chondrite
3	L-5 chondrite
14	L-6 chondrite
6	LL-6 chondrite
1	ureilite

Listing of meteorites recovered from the Allan Hills Middle Western Icefield and survey stations
(1978, 1981, 1983, and 1984 collections).

Meteorite Name	Classification	Weight (g)	Grid Cell	Newsletter
ALHA81004	carbonaceous C2	4.7	E-5	6(1)
ALHA81005	anorthositic breccia	31.4	E-6	6(1)
ALHA81018	L-5 chondrite	2236.9	E-5	6(1)
ALHA81019	H-5 chondrite	1051.2	E-5	6(1)
ALHA81021	E-6 chondrite	695.1	E-6	6(1)
ALHA81022	H-4 chondrite	912.5	E-6	6(1)
ALHA81023	L-5 chondrite	418.3	E-6	6(1)
ALHA81103	H-6 chondrite	136.1	E-5	6(2)
ALHA81111	H-6 chondrite	210.3	E-5	6(1)
ALHA81167	L-6 chondrite	58.5	E-5	7(1)
ALHA81260	E-6 chondrite	124.1	E-5	8(1)
ALH 83004	L-6 chondrite	813.9	E-5	9(1)
ALH 83009	aubrite	1.7	E-5	8(2)
ALH 83010	L-3 chondrite	395.2	B-5	8(1)
ALH 83014	ureilite	1.3	E-6	8(1)
ALH 83015	aubrite	3.1	E-5	8(1)
ALH 83016	carbonaceous C2	4.1	E-5	8(1)
ALH 83017	L-3 chondrite	0.6	E-5	10(2)
ALH 83018	E-6 chondrite	3.7	E-6	10(2)
ALH 83019	H-4 chondrite	2.6	E-6	10(2)
ALH 83020	H-5 chondrite	2.9	D-4	10(2)
ALH 83022	LL-6 chondrite	5.4	E-5	10(2)
ALH 83023	L-4 chondrite	4.2	E-5	10(2)
ALH 83024	H-6 chondrite	6.2	E-5	10(2)
ALH 83026	carbonaceous C3O	0.1	E-6	10(2)
ALH 83027	L-6 chondrite	2.7	E-6	10(2)
ALH 83029	H-5 chondrite	96.2	E-6	10(2)
ALH 83032	LL-6 chondrite	2.9	E-6	10(2)
ALH 83035	H-5 chondrite	1.2	E-5	10(2)
ALH 83037	H-5 chondrite	2.5	E-6	10(2)
ALH 83041	L-6 chondrite	0.3	E-6	10(2)
ALH 83042	H-3 chondrite	0.5	E-5	10(2)
ALH 83043	L-6 chondrite	2.7	E-6	10(2)
ALH 83044	H-5 chondrite	4.8	E-5	10(2)
ALH 83045	L-5 chondrite	1.6	E-6	10(2)
ALH 83046	H-5 chondrite	32.9	E-6	9(3)
ALH 83052	L-6 chondrite	52.8	E-5	9(3)
ALH 83054	LL-6 chondrite	16.8	E-6	10(2)
ALH 83056	H-5 chondrite	1.4	E-6	10(20)
ALH 83058	L-6 chondrite	29.2	D-3	10(2)
ALH 83059	H-5 chondrite	3.5	E-5	10(2)
ALH 83068	H-5 chondrite	0.8	E-5	10(2)
ALH 83070	LL-6 chondrite	215.7	E-4	9(1)
ALH 83072	H-5 chondrite	1.6	D-4	10(2)
ALH 83074	H-5 chondrite	6.4	B-5	10(2)
ALH 84007	aubrite	705.6	H-9	8(2)
ALH 84008	aubrite	301.6	H-10	8(2)
ALH 84009	aubrite	335.6	G-9	9(2)
ALH 84010	aubrite	303.0	H-11	9(2)
ALH 84011	aubrite	138.2	H-11	8(2)
ALH 84012	aubrite	224.7	H-10	9(2)
ALH 84013	aubrite	159.9	I-10	9(2)
ALH 84014	aubrite	49.4	H-11	9(2)
ALH 84015	aubrite	263.9	H-10	9(2)
ALH 84016	aubrite	149.7	H-10	9(2)
ALH 84017	aubrite	79.8	H-11	9(2)
ALH 84018	aubrite	81.7	G-9	9(2)
ALH 84019	aubrite	93.2	F-9	9(2)
ALH 84020	aubrite	191.1	H-10	9(2)
ALH 84021	aubrite	35.7	G-9	9(2)
ALH 84023	aubrite	262.4	I-10	9(2)
ALH 84024	aubrite	194.4	H-10	9(2)
ALH 84057	L-6 chondrite	368.2	F-6	9(1)
ALH 84072	L-6 chondrite	720.9	F-6	9(1)

Listing of meteorites recovered from the Allan Hills Middle Western Icefield and survey stations
(1978, 1981, 1983, and 1984 collections) (continued).

Meteorite Name	Classification	Weight (g)	Grid Cell	Newsletter
ALH 84090	L-6 chondrite	201.8	E-6	9(3)
ALH 84093	H-6 chondrite	113.5	G-9	9(3)
ALH 84096	carbonaceous C4	293.6	E-7	9(3)
ALH 84116	LL-6 chondrite	56.2	E-8	9(3)
ALH 84164	L-6 chondrite	101.4	E-6	10(1)
ALH 84173	L-6 chondrite	1.7	E-5	11(2)
ALH 84178	H-5 chondrite	0.4	D-4	9(3)
ALH 84185	L-5 chondrite	4.8	E-6	9(3)
ALH 84191	carbonaceous C2	14.0	E-7	9(3)
ALH 84198	LL-6 chondrite	5.4	D-5	9(3)
ALH 84203	L-6 chondrite	8.8	E-5	10(2)
ALH 84214	H-6 chondrite	4.9	H-10	10(2)
ALH 84216	H-5 chondrite	5.5	E-6	9(3)
ALH 84238	L-6 chondrite	1.9	D-5	10(2)
ALH 84242	H-6 chondrite	16.9	D-5	11(1)
ALH 84246	H-5 chondrite	1.8	G-9	11(1)
station 160			F-4	
station 161			F-5	
station 162			E-5	
station 164			E-6	
station 180			F-8	
station 181			I-10	
station 182			I-11	
station 183			D-4	
station 184			C-4	

ALLAN HILLS FAR WESTERN ICEFIELD METEORITE LOCATION MAP—EAST AND WEST SECTIONS

1986 and 1987 Editions Explanatory Text with Meteorite Listing for the 1982, 1983, 1984, and 1985 Collections

The Allan Hills Far Western Icefield (76°54'S 157°01'E) is a large bare ice area lying approximately 70 km southwest of the Allan Hills (Fig. 2). This sinuously appearing icefield, trending northwest, is nearly 45 km long and up to 8 km across at its widest point. Approximately 100 sq km of ice are exposed. Slope profiles (Fig. 13) are given for three locations (Fig. 14).

The Far Western Icefield was first visited during the 1982–1983 season and systematic searches were made in selected areas with 45 meteorites recovered. One meteorite (ALH 82102) was discovered in the process of emerging from the ice. A satellite surveying instrument was employed during this season to determine base station locations used in the meteorite location surveys. These points potentially can be used in the study of ice movement rates. A brief visit was made during the 1983–1984 season mainly to collect ice samples and begin the survey traverse that connected all the Allan Hills icefields. Systematic searches of virtually the entire blue ice area were made in the following two field seasons.

The positions of the 317 named meteorites collected from the Far Western Icefield are plotted on the *Allan Hills Far Western Icefield Meteorite Location Map*. Because of the map scale that was desired and the size and orientation of the icefield, two map sections had to be generated. These are designated the West and East sections. Figures 15 and 16 are reduced scale versions of the two sections. Figure 9 shows the areas covered by the map sections. The map scale is 1:25,000 and the UTM grid cell crosses are spaced 2 km apart.

Crude surveying methods were used to determine meteorite positions during the 1982–1983 season. In subsequent seasons most of the meteorite locations and the 1982–1983 base stations were surveyed with the theodolite and EDM. Thus, the relative locations between the 1982–

1983 specimens and all the others are not precise. The locations of several meteorites (ALH 82109, ALH 82116, ALH 82137, ALH 83105, ALH 83108, ALH 84221, ALH 85004, and ALH 85012) were determined only very generally, and placements on the map are therefore approximate. In the 1983–1984 season two carbonaceous chondrite strewn fields were found near the southern end of the icefield. In the larger of the two, 56 fragments were recovered. These have been paired and are named ALH 83100. The general outline of this strewn field is shown on the map. The location of ALH 83102 was the site of a smaller strewn field consisting of 21 paired fragments. A listing of the Far Western Icefield meteorites is given in the following section including a table (Table 6) giving the types of meteorites found there and their numbers.

Two editions of the *Allan Hills Far Western Icefield Meteorite Location Map* have been generated. The 1986 edition of the maps overlaps 7.5 cm where the two sections adjoin. This was eliminated from the 1987 edition. Other changes have also been made on the 1987 edition: (1) minor format and cosmetic changes; (2) deletion of the ALH 85116 specimen location, which turned out to be a terrestrial rock; (3) correction of the ALH 83100 strewn field designation in the legend and addition of ALH 83100 to the map; and (4) elimination of the 7.5 cm overlap between the *east* and *west* sections.

Acknowledgments. We thank T. Meunier and C. Thompson (1982–1983); R. Fudali, A. C. Hitch, K. Nishiizumi, P. Pellas, L. Schultz, and P. Sipiera (1983–1984); C. King-Frazier, S. Sandford, R. Score, C. Thompson, and R. Walker (1984–1985); L. Schultz, E. Zinner, and M. Zolensky (1985–1986) for their contributions to the *Allan Hills Far Western Icefield Meteorite Location Map*. Tony Meunier provided location data for the 1982–1983 meteorites and satellite positioning derived base station coordinates.

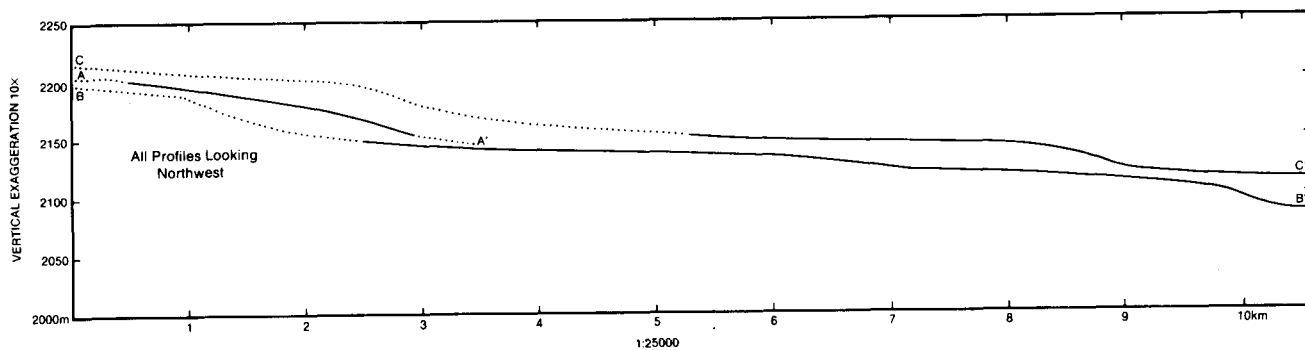


Fig. 13. Slope profiles of the Allan Hills Far Western Icefield.

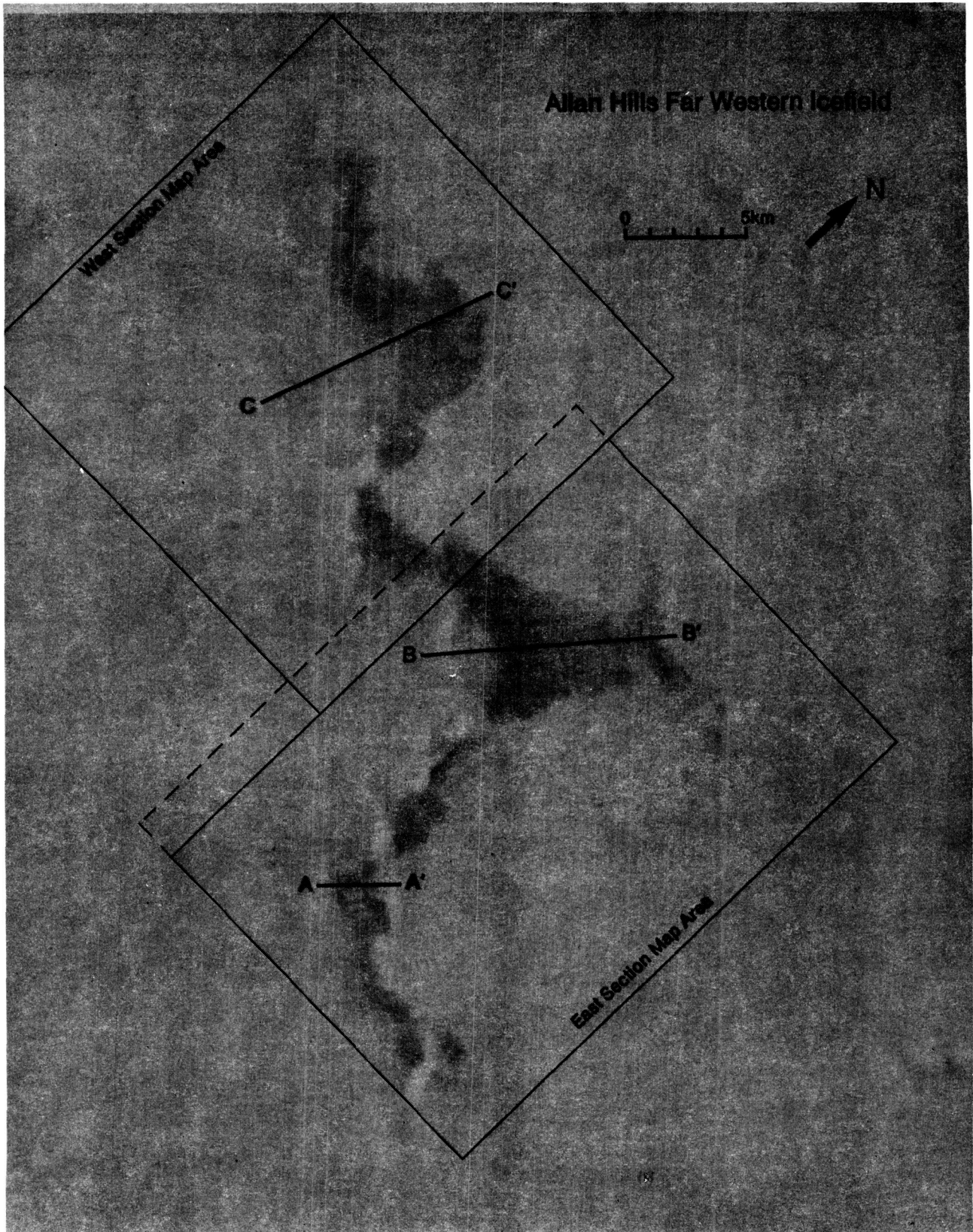


Fig. 14. Enlarged portion of satellite image showing the Allan Hills Far Western Icefield and areas covered by the eastern and western map sections. Dotted line is boundary of the 1986 map edition. Location of the slope profiles is also shown.

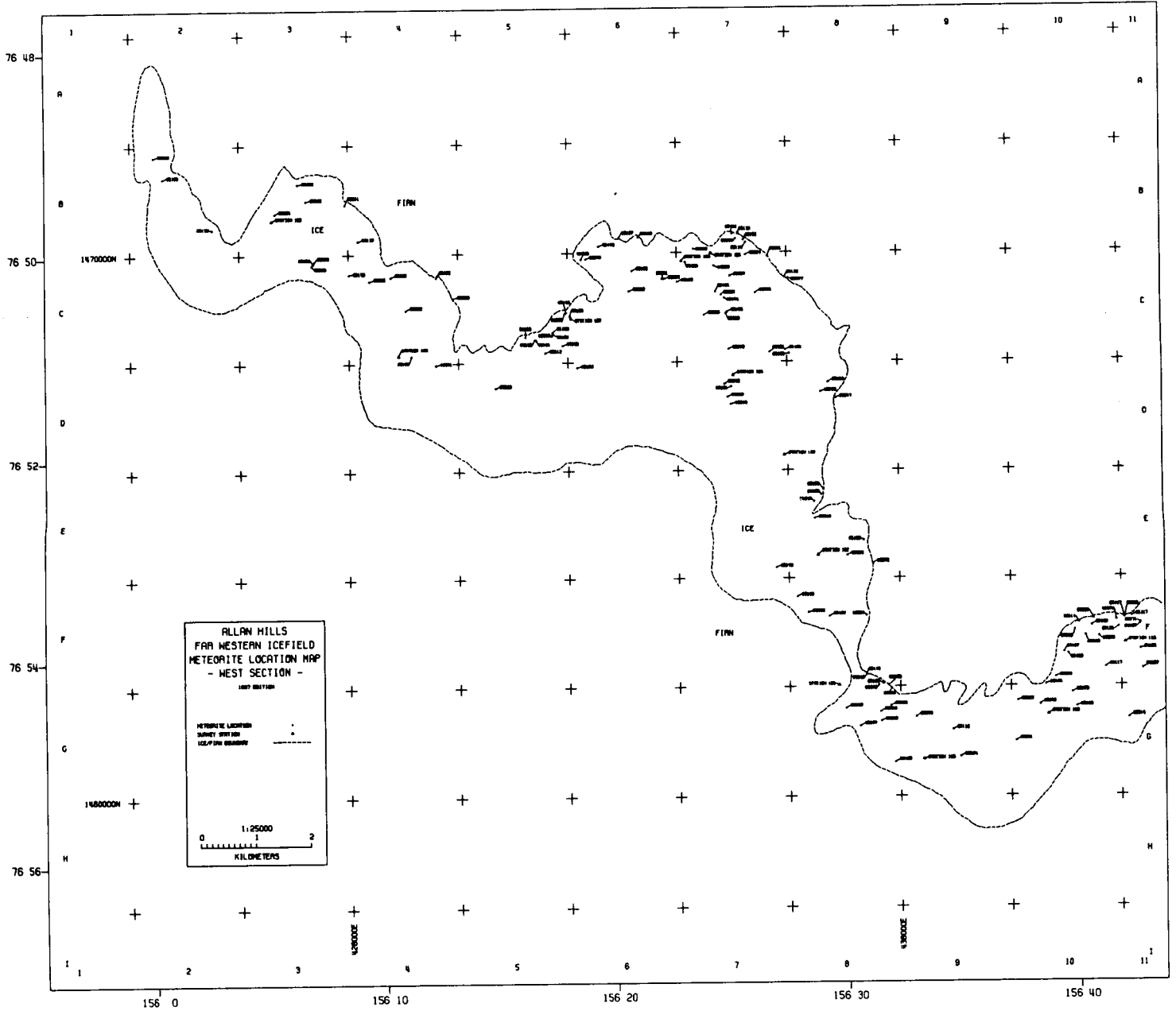


Fig. 15. Reduced example of the Allan Hills Far Western Icefield Meteorite Location Map, western section.

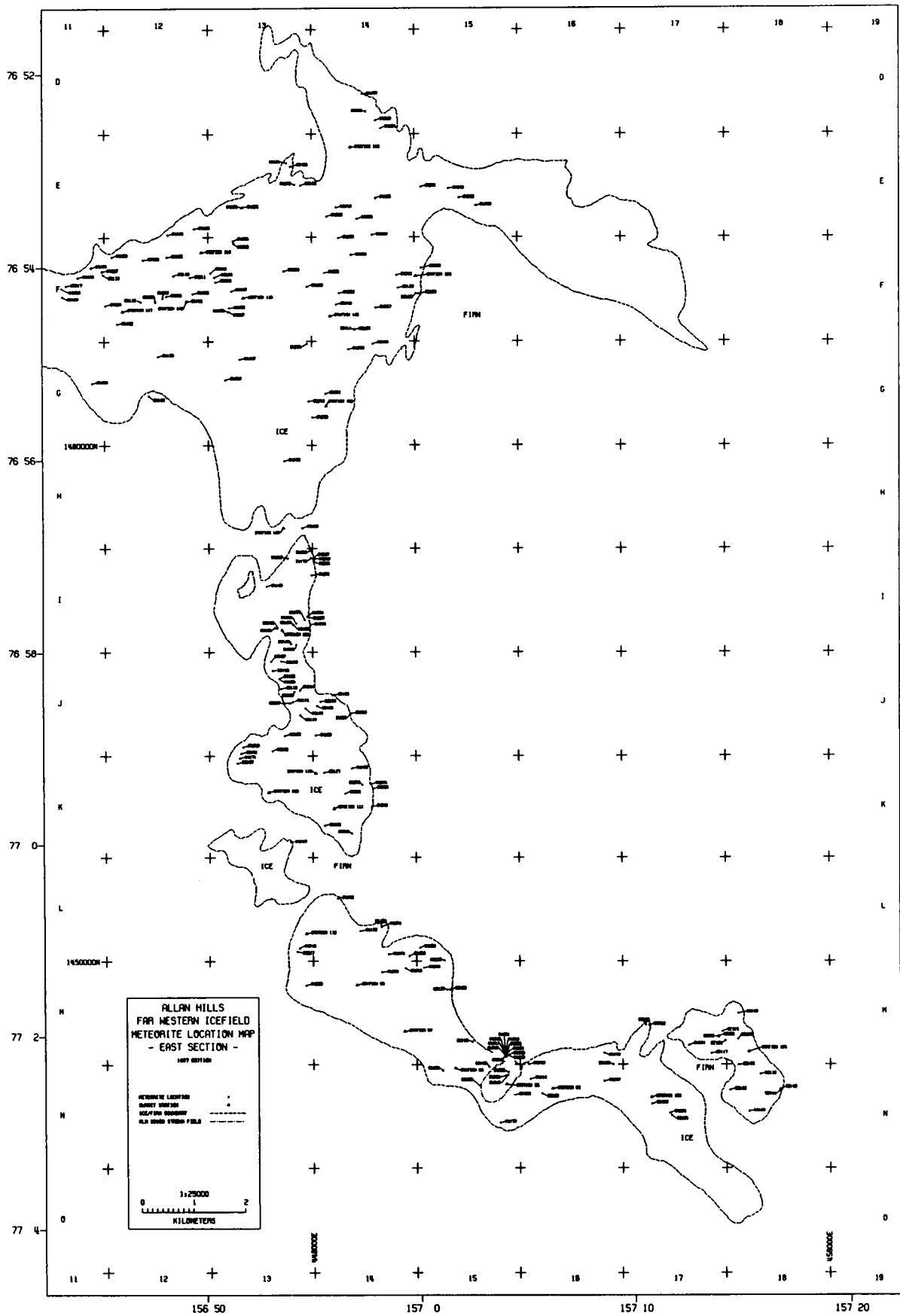


Fig. 16. Reduced example of the Allan Hills Far Western Icefield Meteorite Location Map, eastern section.

TABLE 6. Meteorite types recovered from the Allan Hills Far Western Icefield (1979, 1980, 1981, 1983, 1984, 1985, and 1986 collections).

Number of Specimens	Classification
1	achondrite (unique)
36	carbonaceous C2
3	carbonaceous C3O
2	carbonaceous C3V
3	carbonaceous C4
2	diogenite
1	E-3 chondrite
4	E-4 chondrite
1	euclite
2	H-3 chondrite
5	H-4 chondrite
86	H-5 chondrite
1	H-5 chondrite (in ice)
42	H-6 chondrite
5	L-3 chondrite
2	L-4 chondrite
9	L-5 chondrite
85	L-6 chondrite
3	LL-3 chondrite
20	LL-6 chondrite
1	LL-7 (?) chondrite
3	ureilite

Listing of meteorites recovered from the Allan Hills Far Western Icefield with survey stations
(1982, 1983, 1984, and 1985 collections).

Meteorite Name	Classification	Weight (g)	Grid Cell	Newsletter
ALH 82100	carbonaceous C2	24.3	J-14	6(2)
ALH 82101	carbonaceous C3O	29.1	E-13	6(2)
ALH 82102	H-5 chondrite (in ice)	48.1	N-18	7(2)
ALH 82103	H-5 chondrite	2529.2	E-14	7(1)
ALH 82104	L-5 chondrite	398.8	N-17	7(1)
ALH 82105	L-6 chondrite	363.3	N-17	7(1)
ALH 82106	ureilite	35.1	M-18	7(2)
ALH 82107	L-5 chondrite	9.2	J-13	7(2)
ALH 82108	H-5 chondrite	13.5	I-13	7(2)
ALH 82109	H-5 chondrite	47.2	M-15	7(2)
ALH 82110	H-3 chondrite	39.3	M-18	7(2)
ALH 82111	L-6 chondrite	63.0	F-14	7(2)
ALH 82112	H-5 chondrite	28.3	I-13	7(2)
ALH 82113	H-6 chondrite	61.2	J-13	7(2)
ALH 82114	H-5 chondrite	40.7	M-17	7(2)
ALH 82115	H-5 chondrite	48.5	J-13	7(2)
ALH 82116	H-6 chondrite	18.4	M-15	7(2)
ALH 82117	L-5 chondrite	4.2	M-17	7(2)
ALH 82118	L-6 chondrite	110.9	N-18	7(2)
ALH 82119	H-5 chondrite	23.9	J-13	7(2)
ALH 82120	H-5 chondrite	7.2	F-14	7(2)
ALH 82121	L-6 chondrite	2.4	M-17	7(2)
ALH 82122	H-5 chondrite	142.0	J-13	7(2)
ALH 82123	L-6 chondrite	110.8	H-13	7(2)
ALH 82124	H-6 chondrite	25.8	M-17	7(2)
ALH 82125	L-6 chondrite	178.4	J-13	7(2)
ALH 82126	H-4 chondrite	139.9	F-15	7(2)
ALH 82127	H-6 chondrite	5.1	J-13	7(2)
ALH 82128	H-4 chondrite	15.2	I-13	7(2)
ALH 82129	H-5 chondrite	14.1	J-13	7(2)
ALH 82130	ureilite	44.6	N-18	7(2)
ALH 82131	carbonaceous C2	1.0	E-13	7(2)
ALH 82132	E-4 chondrite	5.9	J-14	7(2)
ALH 82133	H-4 chondrite	19.7	F-15	7(2)
ALH 82134	H-5 chondrite	28.2	E-13	7(2)
ALH 82135	carbonaceous C4	12.1	F-14	7(2)
ALH 82136	H-4 chondrite	4.3	F-15	7(2)
ALH 82137	L-5 chondrite	10.8	M-15	7(2)
ALH 82138	H-6 chondrite	5.0	J-13	7(2)
ALH 82139	L-6 chondrite	0.2	N-18	7(2)
ALH 82140	L-6 chondrite	0.3	N-18	7(2)
ALH 82141	H-5 chondrite	0.6	M-17	7(2)
ALH 82142	L-6 chondrite	20.0	E-13	7(2)
ALH 82143	H-6 chondrite	3.5	G-13	7(2)
ALH 82144	H-5 chondrite	7.3	N-18	7(2)
ALH 83100	carbonaceous C2	3019.0	N-15	7(1)
ALH 83101	L-6 chondrite	639.2	J-13	8(1)
ALH 83102	carbonaceous C2	1786.2	M-16	8(1)
ALH 83103	H-6 chondrite	51.8	J-13	10(2)
ALH 83104	H-5 chondrite	2.1	I-13	10(2)
ALH 83105	L-6 chondrite	0.7	N-15	10(2)
ALH 83106	carbonaceous C2	22.3	I-13	9(1)
ALH 83107	H-5 chondrite	38.4	K-13	10(2)
ALH 83108	carbonaceous C3O	1519.4	N-15	9(1)
ALH 84001	diogenite	1930.9	G-11	8(2)
ALH 84005	L-5 chondrite	12000.0	E-13	9(1)
ALH 84025	achon. (unique)	4.6	L-15	8(2)
ALH 84027	LL-7(?) chondrite	8.0	F-11	8(2)
ALH 84029	carbonaceous C2	119.8	N-15	8(2)
ALH 84030	carbonaceous C2	6.2	M-16	8(2)
ALH 84031	carbonaceous C2	12.5	M-15	8(2)
ALH 84032	carbonaceous C2	7.9	M-15	8(2)
ALH 84034	carbonaceous C2	44.1	M-15	8(2)
ALH 84035	carbonaceous C2	3.2	K-14	9(2)

Listing of meteorites recovered from the Allan Hills Far Western Icefield with survey stations (continued)
(1982, 1983, 1984, and 1985 collections).

Meteorite Name	Classification	Weight (g)	Grid Cell	Newsletter
ALH 84036	carbonaceous C2	2.8	E-12	9(2)
ALH 84037	carbonaceous C3V	3.0	J-14	9(2)
ALH 84038	carbonaceous C4	12.3	E-15	9(2)
ALH 84039	carbonaceous C2	32.8	E-14	9(2)
ALH 84040	carbonaceous C2	28.7	M-15	9(2)
ALH 84041	carbonaceous C2	1.3	K-14	9(2)
ALH 84042	carbonaceous C2	51.3	N-15	8(2)
ALH 84043	carbonaceous C2	16.8	M-15	9(2)
ALH 84044	carbonaceous C2	147.4	N-15	8(2)
ALH 84045	carbonaceous C2	11.4	M-15	9(2)
ALH 84046	carbonaceous C2	1.5	J-14	9(2)
ALH 84047	carbonaceous C2	4.4	M-15	9(2)
ALH 84048	carbonaceous C2	12.6	M-15	9(2)
ALH 84049	carbonaceous C2	29.4	M-15	9(2)
ALH 84050	carbonaceous C2	3.2	L-14	9(2)
ALH 84051	carbonaceous C2	34.3	M-15	9(2)
ALH 84052	LL-6 chondrite	10.5	I-13	9(2)
ALH 84053	carbonaceous C2	5.2	L-15	9(2)
ALH 84058	I-6 chondrite	2002.5	L-14	9(1)
ALH 84060	H-5 chondrite	338.9	E-14	9(1)
ALH 84061	L-6 chondrite	676.4	K-14	9(1)
ALH 84062	L-6 chondrite	958.2	G-13	9(1)
ALH 84063	L-5 chondrite	759.6	J-14	9(1)
ALH 84064	H-5 chondrite	1889.1	G-13	9(1)
ALH 84065	L-6 chondrite	1641.7	F-12	9(2)
ALH 84068	H-5 chondrite	1114.1	G-14	9(1)
ALH 84070	L-6 chondrite	3951.7	F-13	9(1)
ALH 84073	H-5 chondrite	630.6	G-14	9(3)
ALH 84074	H-5 chondrite	757.5	L-14	9(3)
ALH 84076	H-5 chondrite	368.7	K-14	9(3)
ALH 84077	H-5 chondrite	276.4	I-13	9(3)
ALH 84078	H-5 chondrite	283.3	M-15	9(3)
ALH 84079	L-6 chondrite	749.6	F-13	9(3)
ALH 84080	L-6 chondrite	286.8	F-13	9(3)
ALH 84081	LL-6 chondrite	612.3	G-14	9(3)
ALH 84082	H-6 chondrite	556.6	E-15	9(3)
ALH 84084	H-4 chondrite	331.8	F-13	9(3)
ALH 84086	LL-3 chondrite	234.0	N-15	9(3)
ALH 84087	L-6 chondrite	314.6	F-13	9(3)
ALH 84088	H-5 chondrite	297.5	F-13	9(3)
ALH 84089	H-5 chondrite	303.8	F-14	9(3)
ALH 84091	H-5 chondrite	214.6	M-17	9(3)
ALH 84092	L-6 chondrite	213.9	F-14	9(3)
ALH 84094	H-5 chondrite	207.6	D-14	9(3)
ALH 84095	L-6 chondrite	276.8	H-13	9(3)
ALH 84097	L-6 chondrite	388.7	F-11	9(3)
ALH 84098	H-5 chondrite	260.5	D-14	9(3)
ALH 84099	H-5 chondrite	150.3	D-14	9(3)
ALH 84102	L-6 chondrite	213.9	F-12	10(1)
ALH 84104	L-6 chondrite	201.1	L-14	10(1)
ALH 84106	L-6 chondrite	94.7	E-13	10(2)
ALH 84107	LL-6 chondrite	134.1	N-16	9(3)
ALH 84108	H-6 chondrite	214.8	F-11	10(1)
ALH 84112	L-6 chondrite	145.8	F-12	10(1)
ALH 84114	H-6 chondrite	119.9	J-13	10(1)
ALH 84115	H-6 chondrite	194.5	N-16	10(1)
ALH 84117	H-5 chondrite	71.8	F-10	9(3)
ALH 84119	LL-6 chondrite	33.8	F-11	9(3)
ALH 84120	L-3 chondrite	129.0	F-13	10(1)
ALH 84126	LL-3 chondrite	41.2	E-12	9(3)
ALH 84129	L-6 chondrite	37.6	G-12	11(2)
ALH 84132	L-6 chondrite	157.8	L-14	10(1)
ALH 84133	H-5 chondrite	70.5	F-12	11(2)
ALH 84134	L-6 chondrite	113.4	F-11	10(1)

Listing of meteorites recovered from the Allan Hills Far Western Icefield with survey stations (continued)
(1982, 1983, 1984, and 1985 collections).

Meteorite Name	Classification	Weight (g)	Grid Cell	Newsletter
ALH 84135	H-5 chondrite	31.3	J-13	9(3)
ALH 84136	ureilite	83.5	M-16	9(3)
ALH 84140	L-6 chondrite	164.0	M-14	10(1)
ALH 84141	L-6 chondrite	130.3	F-12	10(1)
ALH 84142	L-6 chondrite	78.5	L-14	10(2)
ALH 84144	H-5 chondrite	53.9	I-13	11(2)
ALH 84145	H-5 chondrite	19.2	I-13	11(2)
ALH 84147	H-6 chondrite	54.2	G-13	9(3)
ALH 84150	H-6 chondrite	20.0	M-14	11(2)
ALH 84152	H-5 chondrite	6.4	K-14	11(2)
ALH 84153	H-6 chondrite	242.9	J-13	9(3)
ALH 84154	LL-6 chondrite	87.6	F-11	11(2)
ALH 84155	H-5 chondrite	113.9	F-12	11(2)
ALH 84157	H-5 chondrite	88.6	D-14	9(3)
ALH 84158	H-5 chondrite	53.7	F-14	11(2)
ALH 84160	L-6 chondrite	53.9	G-12	10(2)
ALH 84163	H-5 chondrite	134.9	E-15	10(1)
ALH 84171	H-6 chondrite	36.6	K-13	10(2)
ALH 84175	H-5 chondrite	35.4	I-13	11(1)
ALH 84179	H-5 chondrite	46.5	N-15	11(1)
ALH 84182	L-6 chondrite	14.2	K-14	11(1)
ALH 84193	L-6 chondrite	9.4	F-12	10(2)
ALH 84199	H-5 chondrite	27.1	I-13	11(1)
ALH 84204	H-6 chondrite	24.4	E-13	10(2)
ALH 84205	L-3 chondrite	25.2	E-14	11(1)
ALH 84207	L-6 chondrite	4.5	I-14	10(2)
ALH 84208	H-6 chondrite	20.9	I-13	11(1)
ALH 84211	H-6 chondrite	49.2	F-12	11(1)
ALH 84217	H-5 chondrite	2.7	L-13	11(1)
ALH 84218	L-6 chondrite	33.0	L-13	10(2)
ALH 84219	L-6 chondrite	9.8	K-13	10(2)
ALH 84221	H-5 chondrite	16.4	E-15	11(1)
ALH 84223	H-5 chondrite	10.6	M-13	11(1)
ALH 84231	L-6 chondrite	42.6	F-14	10(2)
ALH 84234	L-6 chondrite	3.9	I-14	11(2)
ALH 84241	H-5 chondrite	16.7	J-13	11(1)
ALH 84244	L-6 chondrite	33.5	F-14	10(2)
ALH 84245	H-5 chondrite	18.9	I-13	9(3)
ALH 84247	L-6 chondrite	49.6	F-14	10(2)
ALH 84249	H-5 chondrite	23.4	J-13	11(1)
ALH 84251	H-5 chondrite	34.3	I-13	11(1)
ALH 84252	H-6 chondrite	3.1	F-12	9(3)
ALH 84253	H-5 chondrite	7.1	I-13	11(1)
ALH 84254	E-4 chondrite	2.0	K-14	9(3)
ALH 84255	LL-6 chondrite	11.3	I-14	9(3)
ALH 84257	H-6 chondrite	18.8	I-13	10(2)
ALH 84258	L-5 chondrite	2.6	F-12	11(1)
ALH 84261	L-6 chondrite	5.1	F-12	10(2)
ALH 84264	L-6 chondrite	137.6	N-17	9(3)
ALH 85001	euclite	212.3	C-7	9(3)
ALH 85002	carbonaceous C4	437.7	G-8	9(3)
ALH 85003	carbonaceous C3O	50.1	F-13	10(1)
ALH 85004	carbonaceous C2	8.4	M-17	10(1)
ALH 85005	carbonaceous C2	18.9	J-14	9(3)
ALH 85006	carbonaceous C3V	49.0	C-5	9(3)
ALH 85007	carbonaceous C2	82.0	F-13	9(3)
ALH 85008	carbonaceous C2	32.1	C-3	9(3)
ALH 85009	carbonaceous C2	46.6	C-3	9(3)
ALH 85010	carbonaceous C2	3.2	C-3	10(1)
ALH 85011	carbonaceous C2	10.7	B-3	10(1)
ALH 85012	carbonaceous C2	3.9	M-17	10(1)
ALH 85013	carbonaceous C2	130.4	E-7	9(3)
ALH 85014	L-6 chondrite	75.0	G-11	9(3)
ALH 85015	diogenite	3.2	F-8	9(3)

Listing of meteorites recovered from the Allan Hills Far Western Icefield with survey stations (continued)
(1982, 1983, 1984, and 1985 collections).

Meteorite Name	Classification	Weight (g)	Grid Cell	Newsletter
ALH 85016	L-6 chondrite	1412.0	K-14	10(1)
ALH 85017	L-6 chondrite	2361.4	F-11	10(1)
ALH 85018	H-6 chondrite	811.8	E-8	10(1)
ALH 85019	LL-6 chondrite	632.8	G-8	10(1)
ALH 85020	H-6 chondrite	744.3	F-12	10(1)
ALH 85021	H-5 chondrite	646.8	C-7	10(1)
ALH 85022	L-6 chondrite	951.5	C-6	10(1)
ALH 85023	H-6 chondrite	438.5	B-7	10(1)
ALH 85024	H-5 chondrite	387.7	C-7	10(1)
ALH 85025	H-5 chondrite	713.0	C-8	10(1)
ALH 85026	L-6 chondrite	817.1	D-5	10(1)
ALH 85027	L-6 chondrite	370.4	G-10	10(1)
ALH 85028	H-6 chondrite	325.7	C-7	10(1)
ALH 85029	L-6 chondrite	388.8	C-7	10(1)
ALH 85030	H-6 chondrite	619.7	E-8	10(1)
ALH 85031	H-6 chondrite	200.6	F-8	10(1)
ALH 85032	H-6 chondrite	424.2	D-7	10(1)
ALH 85033	L-4 chondrite	249.8	D-7	10(1)
ALH 85034	L-6 chondrite	343.9	G-9	10(1)
ALH 85036	H-6 chondrite	231.5	C-6	10(1)
ALH 85038	H-5 chondrite	124.9	B-3	10(2)
ALH 85039	L-6 chondrite	140.2	F-10	10(2)
ALH 85040	L-6 chondrite	95.7	B-2	10(2)
ALH 85042	H-5 chondrite	127.9	F-13	10(2)
ALH 85043	H-5 chondrite	204.7	G-8	10(2)
ALH 85045	L-3 chondrite	145.0	D-7	10(2)
ALH 85046	L-6 chondrite	148.9	F-13	10(2)
ALH 85047	L-6 chondrite	4.2	D-8	10(2)
ALH 85049	L-6 chondrite	4.8	E-8	10(2)
ALH 85050	L-6 chondrite	0.9	E-8	10(2)
ALH 85051	H-5 chondrite	4.9	C-7	11(2)
ALH 85052	H-6 chondrite	17.4	B-3	11(2)
ALH 85053	L-4 chondrite	0.5	F-11	10(2)
ALH 85054	H-5 chondrite	55.3	C-7	12(1)
ALH 85055	H-5 chondrite	5.8	F-11	12(1)
ALH 85056	H-5 chondrite	7.5	C-5	11(2)
ALH 85057	LL-6 chondrite	0.8	C-7	10(2)
ALH 85058	H-5 chondrite	0.3	F-10	11(2)
ALH 85059	LL-6 chondrite	8.8	F-10	10(2)
ALH 85060	L-6 chondrite	0.5	C-4	10(2)
ALH 85061	L-6 chondrite	2.0	C-6	10(2)
ALH 85062	L-3 chondrite	167.3	C-4	10(2)
ALH 85063	L-6 chondrite	12.7	D-8	10(2)
ALH 85064	L-6 chondrite	3.7	C-6	10(2)
ALH 85065	L-6 chondrite	9.7	B-7	10(2)
ALH 85066	LL-6 chondrite	8.0	G-8	10(2)
ALH 85069	H-6 chondrite	4.6	C-7	11(2)
ALH 85070	L-3 chondrite	12.9	C-6	11(2)
ALH 85071	H-5 chondrite	18.7	F-11	11(2)
ALH 85072	H-6 chondrite	4.3	E-8	10(2)
ALH 85073	LL-6 chondrite	15.6	G-10	10(2)
ALH 85074	H-5 chondrite	3.3	F-10	11(2)
ALH 85075	L-6 chondrite	36.4	F-10	10(2)
ALH 85077	H-5 chondrite	12.0	C-8	11(2)
ALH 85078	L-6 chondrite	1.2	F-8	11(2)
ALH 85079	LL-6 chondrite	83.1	G-9	10(2)
ALH 85080	L-6 chondrite	54.2	F-8	10(2)
ALH 85081	H-6 chondrite	12.2	G-10	11(2)
ALH 85082	L-6 chondrite	19.4	F-10	10(2)
ALH 85083	L-6 chondrite	92.9	F-10	10(2)
ALH 85084	LL-6 chondrite	18.4	B-3	10(2)
ALH 85085	E-3 chondrite	11.9	C-7	10(2)
ALH 85086	H-5 chondrite	12.2	C-5	12(1)
ALH 85087	L-6 chondrite	11.3	F-11	10(2)

Listing of meteorites recovered from the Allan Hills Far Western Icefield with survey stations (continued)
(1982, 1983, 1984, and 1985 collections).

Meteorite Name	Classification	Weight (g)	Grid Cell	Newsletter
ALH 85089	H-5 chondrite	1.5	G-10	12(1)
ALH 85090	L-6 chondrite	10.5	F-12	10(2)
ALH 85091	H-5 chondrite	31.1	D-4	12(1)
ALH 85092	L-5 chondrite	25.6	C-7	10(2)
ALH 85093	L-6 chondrite	11.5	F-8	10(2)
ALH 85095	L-6 chondrite	32.5	C-4	10(2)
ALH 85096	L-6 chondrite	3.1	C-4	10(2)
ALH 85097	H-5 chondrite	61.4	G-8	12(1)
ALH 85098	H-5 chondrite	6.8	C-5	12(1)
ALH 85099	H-5 chondrite	7.1	C-4	12(1)
ALH 85100	H-5 chondrite	57.7	C-4	12(1)
ALH 85101	L-6 chondrite	8.1	D-7	12(1)
ALH 85102	H-5 chondrite	12.6	C-6	12(1)
ALH 85103	L-6 chondrite	86.9	G-10	12(1)
ALH 85104	H-5 chondrite	98.9	C-7	12(1)
ALH 85105	L-6 chondrite	12.4	G-8	12(1)
ALH 85106	carbonaceous C2	2.7	F-8	10(2)
ALH 85107	H-5 chondrite	36.6	F-10	12(1)
ALH 85108	H-6 chondrite	14.6	C-5	12(1)
ALH 85111	H-5 chondrite	12.9	F-10	12(1)
ALH 85112	L-6 chondrite	23.0	C-5	10(2)
ALH 85113	L-6 chondrite	39.9	G-9	10(2)
ALH 85114	H-5 chondrite	11.4	B-7	10(2)
ALH 85115	L-6 chondrite	21.9	F-8	10(2)
ALH 85117	H-6 chondrite	27.8	F-11	10(2)
ALH 85119	E-4 chondrite	20.6	B-4	10(2)
ALH 85120	H-5 chondrite	8.2	C-6	12(1)
ALH 85121	H-3 chondrite	55.3	C-7	11(2)
ALH 85124	L-6 chondrite	63.5	F-10	10(2)
ALH 85125	H-5 chondrite	18.8	E-8	12(1)
ALH 85126	H-5 chondrite	46.5	D-8	12(1)
ALH 85127	H-6 chondrite	10.0	K-14	12(1)
ALH 85128	H-6 chondrite	16.1	C-5	10(2)
ALH 85129	LL-6 chondrite	127.4	F-11	10(2)
ALH 85130	H-6 chondrite	99.7	B-2	10(2)
ALH 85131	L-6 chondrite	34.2	C-5	10(2)
ALH 85132	L-6 chondrite	49.3	C-5	10(2)
ALH 85133	H-5 chondrite	90.6	N-16	12(1)
ALH 85134	H-5 chondrite	10.4	F-10	12(1)
ALH 85135	LL-6 chondrite	11.6	C-7	10(2)
ALH 85136	H-6 chondrite	75.3	C-7	12(1)
ALH 85137	LL-6 chondrite	6.7	B-6	10(2)
ALH 85138	LL-6 chondrite	18.0	B-7	10(2)
ALH 85139	H-6 chondrite	26.0	F-10	12(1)
ALH 85140	H-6 chondrite	9.1	F-14	12(1)
ALH 85141	H-5 chondrite	10.6	B-7	12(1)
ALH 85142	H-5 chondrite	50.8	B-6	12(1)
ALH 85143	H-5 chondrite	17.9	C-5	12(1)
ALH 85145	H-5 chondrite	45.6	G-14	12(1)
ALH 85146	H-5 chondrite	39.7	C-4	12(1)
ALH 85147	L-6 chondrite	3.0	F-11	10(2)
ALH 85148	H-6 chondrite	3.6	F-8	10(2)
ALH 85149	L-6 chondrite	16.9	B-6	10(2)
ALH 85150	L-5 chondrite	13.0	G-8	12(1)
ALH 85152	LL-6 chondrite	36.4	C-7	10(2)
ALH 85154	LL-6 chondrite	4.9	B-2	10(2)
ALH 85155	L-3 chondrite	18.5	C-7	10(2)
ALH 85156	H-6 chondrite	32.0	B-7	12(1)
ALH 85157	L-6 chondrite	20.1	F-8	10(2)
ALH 85158	LL-6 chondrite	2.9	E-8	10(2)
ALH 85159	E-4 chondrite	11.0	D-6	10(2)
station 94			N-16	
station 95			N-15	
station 96			N-15	

Listing of meteorites recovered from the Allan Hills Far Western Icefield with survey stations (continued)
(1982, 1983, 1984, and 1985 collections).

Meteorite Name	Classification	Weight (g)	Grid Cell	Newsletter
station 97			M-14	
station 98			M-14	
station 100			F-15	
station 101			I-13	
station 102			K-13	
station 103			N-17	
station 104			N-18	
station 105			F-14	
station 107			H-13	
station 108			G-14	
station 110			K-14	
station 111			K-14	
station 112			L-13	
station 113			E-14	
station 114			F-13	
station 115			F-12	
station 116			F-12	
station 117			F-12	
station 118			F-11	
station 119			G-10	
station 120			G-9	
station 121			F-8	
station 122			E-8	
station 123			D-7	
station 124			D-7	
station 125			B-7	
station 126			C-7	
station 127			C-6	
station 128			C-4	
station 129			B-3	

ELEPHANT MORAINÉ ICEFIELD METEORITE LOCATION MAP

1986 and 1987 Editions Explanatory Text with Meteorite Listing for the 1979, 1982, 1983, 1984, and 1986 Collections

Elephant Moraine is an unusual, isolated surficial moraine not associated with exposed bedrock and lying along an escarpment running westward from Reckling Peak (Fig. 2). Bare ice areas surround the moraine. In the vicinity of the moraine, upward of 50 sq km of ice are exposed. Elephant Moraine consists of a thin veneer of rocks lying on ice. The moraine has a general northward trend, normal to the escarpment and is streaming to the north with the ice flow toward the David Glacier (Figs. 17 and 18). Elephant Moraine and the similar Reckling Moraine have been the focus of studies by Gunter Faure and coworkers (Faure and Taylor, 1985; Faure et al., 1987).

Ten meteorites were collected on a reconnaissance visit in the 1979–1980 field season. A brief period during the 1982–1983 season was spent in systematic searching. Virtually the entire bare ice area covered by the location map was systematically searched or visited on a reconnaissance basis during the 1983–1984 season. Small collections were made in the 1984–1985 and 1986–1987 seasons by the parties studying the moraine.

During the 1982–1983 season a reconnaissance trip was made to the icefields west and northwest of Elephant Moraine. The icefields 20–35 km west of Elephant Moraine (Fig. 2) appear to be associated with a continuation of the Reckling Moraine–Elephant Moraine escarpment. From this area six meteorites (EET 82604, EET 82609, EET 82610, EET 82614, EET 82615, and EET 82616) were recovered. The icefield 35–60 km northwest of Elephant Moraine (not shown on Fig. 2) was visited briefly and two meteorites (EET 82608 and EET 82612) were collected.

The locations of 234 of the 236 meteorites collected from the vicinity of Elephant Moraine in the 1979–1980, 1982–1983, 1983–1984, and 1984–1985 and 1986–1987 seasons are plotted on the Elephant Moraine Icefield Meteorite Location Map. A reduced scale example of the map is shown in Fig. 19. Map scale is 1:12,500 and grid crosses are on 1 km spacings. Two editions of the map have been produced. The following changes have been made

in the 1987 edition: (1) addition of the three 1986 specimens; (2) deletion of terrestrial samples EET 83313, EET 83327, EET 83332, and EET 83381 from the map and meteorite databases; (3) addition of EET 83403 to the map and meteorite databases; (4) combined location of two mapped fragments of EETA79007 to one representative location; and (5) minor format and cosmetic enhancements.

The locations of meteorites found on the 1979–1980 reconnaissance trip were approximately plotted on aerial photographs. The locations of meteorites found in succeeding seasons were determined by crude surveying methods. Thus, only the relative positions of meteorites found within a given season are shown accurately. A theodolite and EDM were used to establish precise control positions of the 110, 115, and Elephant stations relative to the satellite-surveyed Dr. Seuss base station. The meteorite locations, the moraine edges, and ice/firn boundaries were plotted by hand on a base map and then digitized. A listing of the meteorites recovered from the Elephant Moraine Icefield follows and includes a table (Table 7) of the types of meteorites recovered and their numbers.

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REFERENCES

- Faure G. and Taylor K. S. (1985) The geology and origin of the Elephant Moraine on the east antarctic icesheet. *U.S. Antarct. J.*, 20(5), 11–12.
- Faure G., Strobel M., Hagen E., Buchanan D. (1987) The glacial geology of Reckling Moraine on the east antarctic icesheet. *U.S. Antarct. J.*, 22(5), 61–63.

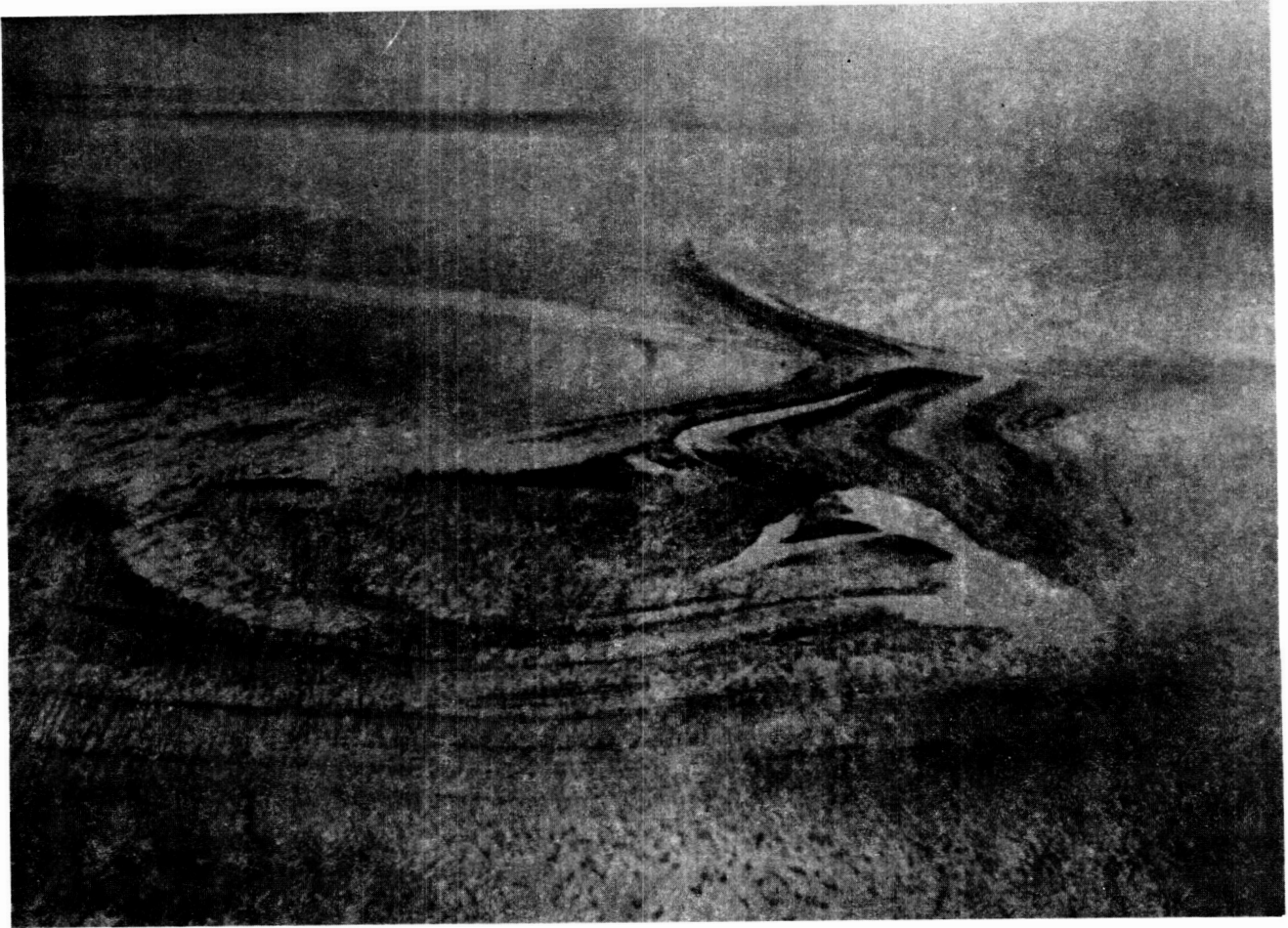


Fig. 17. Oblique aerial photo of Elephant Moraine. Looking northward. (Photo courtesy of G. Faure)

ORIGINAL PAGE
BLACK AND WHITE PHOTOGRAPH



Fig. 18. Vertical aerial photo of Elephant Moraine. Entire photo is within map area. (U.S. Navy photo TMA-2376:0028)

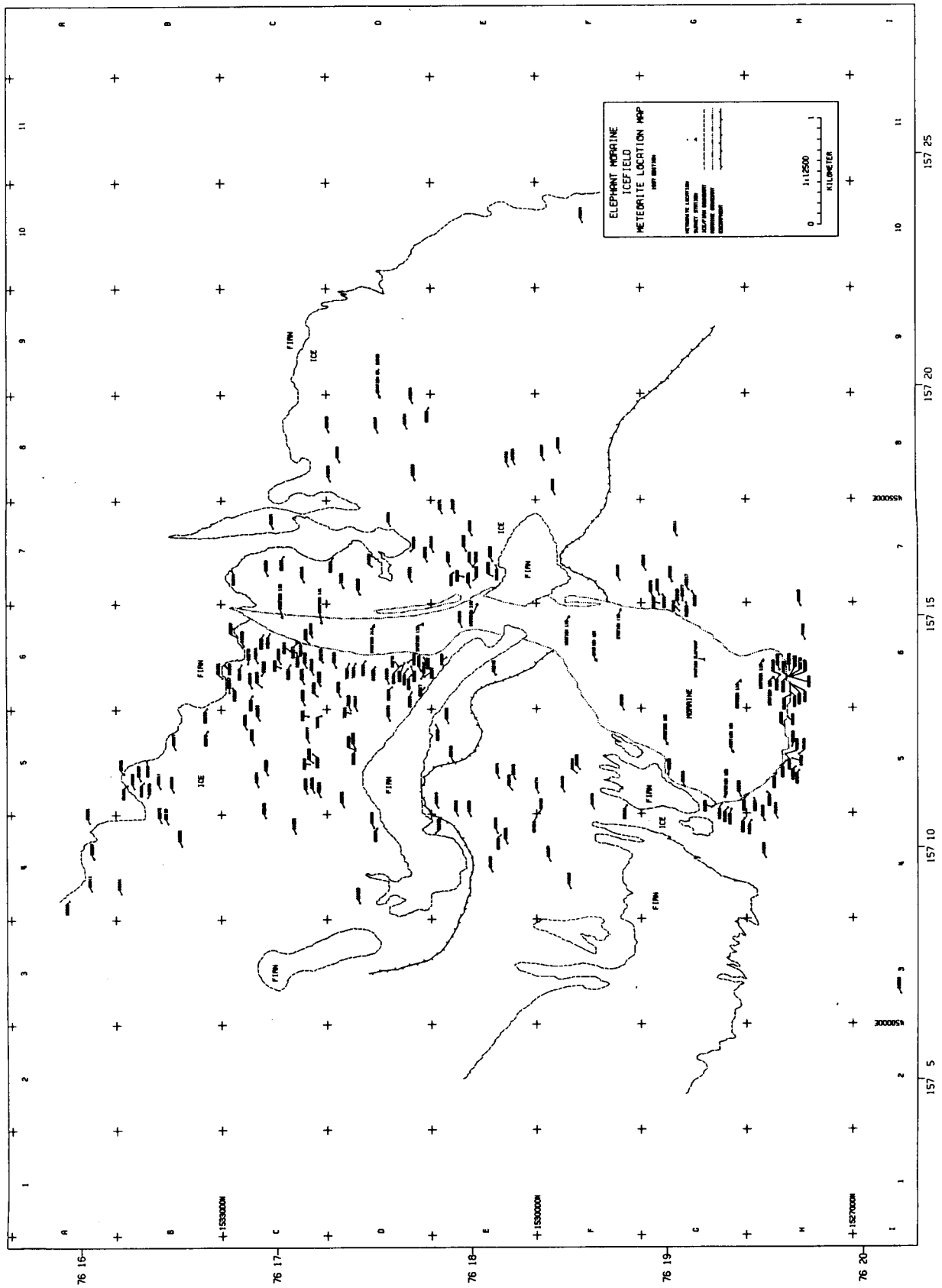


Fig. 19. Reduced example of the Elephant Moraine Icefield Meteorite Location Map.

TABLE 7. Types of meteorites recovered from the Elephant Moraine Icefield (1979, 1982, 1984, and 1986 collections).

Number of Specimens	Classification
1	achondrite (unique)
1	achondrite
1	basaltic achondrite
6	carbonaceous C2
1	carbonaceous C4
3	diogenite
3	E-4 chondrite
2	euclite
11	euclite (polymict)
2	H-3 chondrite
4	H-4 chondrite
1	H-4,6 chondrite
33	H-5 chondrite
23	H-6 chondrite
3	howardite
1	iron-ataxite
4	iron-octahedrite
6	L-3 chondrite
4	L-4 chondrite
10	L-5 chondrite
94	L-6 chondrite
1	LL-5 chondrite
11	LL-6 chondrite
1	shergottite
1	ureilite

Listing of meteorites recovered from the Elephant Moraine Icefield and survey stations
(1979, 1982, 1984, and 1986 collections).

Meteorite Name	Classification	Weight (g)	Grid Cell	Newsletter
EETA79001	shergottite	7942.0	D-7	9(1)
EETA79002	diogenite	2843.0	H-6	4(1)
EETA79003	L-6 chondrite	435.6	D-6	4(1)
EETA79004	euclite	390.3	D-6	4(1)
EETA79005	euclite (polymict)	450.9	D-6	4(1)
EETA79006	howardite	716.4	D-5	4(1)
EETA79007	H-5 chondrite	199.9	C-5	4(1)
EETA79009	L-5 chondrite	140.3	D-6	4(1)
EETA79010	L-6 chondrite	287.3	D-5	4(1)
EETA79011	euclite (polymict)	86.4	D-5	3(3)
EET 82600	howardite	247.1	D-6	7(1)
EET 82601	L-3 chondrite	149.5	E-7	7(2)
EET 82602	H-4 chondrite	1824.1	D-5	7(1)
EET 82603	H-5 chondrite	8210.0	D-8	7(1)
EET 82604	H-5 chondrite	1570.6		7(1)
EET 82605	L-6 chondrite	624.6	D-5	7(1)
EET 82606	L-6 chondrite	981.9	D-5	7(1)
EET 82607	L-6 chondrite	165.3	D-8	7(1)
EET 82608	LL-6 chondrite	94.5		7(2)
EET 82609	H-4 chondrite	325.5		7(1)
EET 82610	H-6 chondrite	42.1		7(2)
EET 82611	L-4 chondrite	12.6	G-7	7(2)
EET 82612	L-6 chondrite	31.6		7(2)
EET 82613	L-4 chondrite	4.2	G-7	7(2)
EET 82614	H-5 chondrite	8.4		7(2)
EET 82615	H-6 chondrite	29.3		7(2)
EET 82616	H-4 chondrite	2.1		7(2)
EET 83200	H-5 chondrite	778.8	E-4	8(1)
EET 83201	H-6 chondrite	1059.8	D-7	8(1)
EET 83202	L-6 chondrite	1213.2	E-5	8(1)
EET 83203	H-5 chondrite	545.6	H-6	8(1)
EET 83204	LL-6 chondrite	376.6	D-4	8(1)
EET 83205	L-6 chondrite	470.8	H-6	8(1)
EET 83206	L-6 chondrite	461.9	C-4	8(1)
EET 83207	H-4 chondrite	1238.3	A-4	8(1)
EET 83208	H-5 chondrite	263.0	B-5	8(1)
EET 83209	L-6 chondrite	520.0	H-4	8(1)
EET 83210	L-6 chondrite	425.6	C-6	8(1)
EET 83211	H-4 chondrite	542.7	A-4	8(1)
EET 83212	euclite (polymict)	402.1	C-6	8(1)
EET 83213	L-3 chondrite	2727.0	C-6	8(1)
EET 83214	L-6 chondrite	1397.5	C-6	8(1)
EET 83215	H-6 chondrite	510.4	E-6	8(1)
EET 83216	L-6 chondrite	789.9	G-5	9(1)
EET 83217	L-6 chondrite	374.7	G-7	9(1)
EET 83218	L-6 chondrite	191.9	C-6	9(1)
EET 83219	L-6 chondrite	243.3	B-4	9(1)
EET 83220	L-6 chondrite	330.9	C-5	9(1)
EET 83221	H-4,6 chondrite	313.9	H-4	9(1)
EET 83222	L-6 chondrite	317.0	E-7	9(1)
EET 83223	H-5 chondrite	218.6	D-7	9(1)
EET 83224	carbonaceous C2	8.6	F-10	8(1)
EET 83225	ureilite	44.0	D-7	8(1)
EET 83226	carbonaceous C2	33.1	C-6	8(1)
EET 83227	euclite (polymict)	1973.0	E-7	8(1)
EET 83228	euclite (polymict)	1206.0	C-6	8(1)
EET 83229	euclite (polymict)	312.9	C-6	8(1)
EET 83230	iron-ataxite	530.0	E-6	7(2)
EET 83231	euclite (polymict)	66.4	D-7	8(1)
EET 83232	euclite (polymict)	211.2	C-6	8(1)
EET 83234	euclite (polymict)	180.6	C-6	8(1)
EET 83235	basaltic achon.	254.6	C-6	8(1)
EET 83236	euclite	6.4	H-5	8(1)
EET 83237	L-6 chondrite	882.7	D-6	8(1)

Listing of meteorites recovered from the Elephant Moraine Icefield and survey stations (continued)
(1979, 1982, 1984, and 1986 collections).

Meteorite Name	Classification	Weight (g)	Grid Cell	Newsletter
EET 83238	L-6 chondrite	382.1	B-6	9(1)
EET 83239	L-6 chondrite	282.3	B-5	9(1)
EET 83240	L-5 chondrite	247.8	G-6	9(2)
EET 83241	L-6 chondrite	203.3	B-4	9(1)
EET 83242	L-5 chondrite	282.1	D-6	9(1)
EET 83243	L-6 chondrite	288.1	C-5	9(1)
EET 83244	L-6 chondrite	384.1	C-7	9(1)
EET 83245	iron-octahedrite	59.0	C-6	7(2)
EET 83246	diogenite	48.3	G-6	8(1)
EET 83247	diogenite	22.5	E-7	8(2)
EET 83248	H-3 chondrite	39.2	G-5	9(1)
EET 83250	carbonaceous C2	11.5	E-4	8(1)
EET 83251	euclite (polymict)	261.4	C-6	8(1)
EET 83252	L-6 chondrite	183.7	G-7	9(1)
EET 83253	L-6 chondrite	44.1	C-5	9(1)
EET 83254	E-4 chondrite	7.7	D-6	10(2)
EET 83255	L-6 chondrite	38.8	C-4	10(2)
EET 83256	H-5 chondrite	5.0	D-8	10(2)
EET 83257	L-6 chondrite	13.6	D-6	10(2)
EET 83258	L-6 chondrite	46.7	D-8	10(2)
EET 83259	L-6 chondrite	4.1	G-5	10(2)
EET 83260	L-3 chondrite	15.4	H-6	9(2)
EET 83261	L-6 chondrite	54.5	L-6	10(2)
EET 83262	H-5 chondrite	23.9	E-8	9(2)
EET 83263	H-6 chondrite	10.2	I-3	10(2)
EET 83264	L-6 chondrite	17.5	C-6	10(2)
EET 83265	L-6 chondrite	54.9	C-7	10(2)
EET 83266	L-6 chondrite	55.9	E-4	10(2)
EET 83267	H-3 chondrite	27.7	F-8	9(2)
EET 83268	L-6 chondrite	19.5	G-5	10(2)
EET 83269	L-5 chondrite	8.5	H-4	9(2)
EET 83270	H-6 chondrite	2.4	F-5	10(2)
EET 83271	L-6 chondrite	67.3	E-5	9(2)
EET 83272	L-6 chondrite	34.5	D-7	10(2)
EET 83273	LL-6 chondrite	146.6	F-5	10(2)
EET 83274	L-3 chondrite	82.7	C-6	9(2)
EET 83275	H-6 chondrite	85.8	C-5	10(2)
EET 83276	L-6 chondrite	48.9	C-6	9(2)
EET 83277	L-5 chondrite	52.7	G-7	10(2)
EET 83278	H-5 chondrite	71.9	C-6	10(2)
EET 83279	L-6 chondrite	35.6	B-6	10(2)
EET 83280	L-6 chondrite	29.1	H-5	10(2)
EET 83281	H-6 chondrite	51.0	C-6	10(2)
EET 83282	H-5 chondrite	78.9	E-7	10(2)
EET 83283	euclite (polymict)	57.3	C-6	8(1)
EET 83284	L-6 chondrite	53.3	D-6	10(2)
EET 83285	H-5 chondrite	3.2	C-6	9(1)
EET 83286	L-6 chondrite	33.6	E-7	10(2)
EET 83287	H-5 chondrite	46.0	H-6	10(2)
EET 83288	H-6 chondrite	37.7	E-5	10(2)
EET 83289	L-6 chondrite	7.8	C-6	9(1)
EET 83290	LL-6 chondrite	1.4	B-5	9(1)
EET 83291	L-5 chondrite	4.7	G-7	10(2)
EET 83292	H-5 chondrite	9.3	F-5	9(1)
EET 83293	H-5 chondrite	18.6	D-6	10(2)
EET 83294	L-6 chondrite	82.4	C-5	10(2)
EET 83295	H-6 chondrite	27.9	D-8	9(1)
EET 83296	L-6 chondrite	62.9	E-5	10(2)
EET 83297	L-6 chondrite	17.5	F-4	10(2)
EET 83298	L-6 chondrite	8.9	F-8	10(2)
EET 83299	H-6 chondrite	6.3	E-6	10(2)
EET 83300	H-5 chondrite	115.1	C-6	10(1)
EET 83301	L-6 chondrite	87.0	D-7	10(2)
EET 83302	L-6 chondrite	130.4	C-6	10(2)

Listing of meteorites recovered from the Elephant Moraine Icefield and survey stations (continued)
(1979, 1982, 1984, and 1986 collections).

Meteorite Name	Classification	Weight (g)	Grid Cell	Newsletter
EET 83303	H-5 chondrite	11.8	D-8	9(1)
EET 83304	L-6 chondrite	37.3	D-5	10(2)
EET 83305	H-5 chondrite	167.0	C-6	9(1)
EET 83306	L-6 chondrite	41.8	E-8	10(2)
EET 83307	E-4 chondrite	4.8	B-5	9(1)
EET 83308	L-5 chondrite	136.9	E-7	9(1)
EET 83309	achondrite (unique)	60.8	F-5	9(1)
EET 83310	H-6 chondrite	64.2	C-6	10(2)
EET 83311	carbonaceous C4	15.3	B-5	10(2)
EET 83312	L-6 chondrite	93.0	E-7	9(1)
EET 83314	L-6 chondrite	23.7	F-5	10(2)
EET 83315	L-6 chondrite	113.5	H-6	10(2)
EET 83316	L-6 chondrite	51.1	H-6	10(2)
EET 83317	L-6 chondrite	119.0	D-6	10(1)
EET 83318	L-4 chondrite	54.9	H-4	9(1)
EET 83319	L-6 chondrite	7.2	E-5	10(2)
EET 83320	H-6 chondrite	56.3	D-6	10(2)
EET 83321	H-6 chondrite	11.0	H-5	10(2)
EET 83322	E-4 chondrite	14.3	D-6	9(1)
EET 83323	L-6 chondrite	140.5	E-4	10(1)
EET 83324	H-5 chondrite	142.8	C-7	9(1)
EET 83325	L-6 chondrite	93.4	H-5	10(2)
EET 83326	H-5 chondrite	112.6	C-5	10(1)
EET 83328	L-6 chondrite	88.1	D-7	10(2)
EET 83329	L-4 chondrite	67.7	G-7	9(1)
EET 83330	L-6 chondrite	49.2	C-7	10(2)
EET 83331	H-5 chondrite	0.3	C-6	10(2)
EET 83333	iron-octahedrite	188.6	E-7	9(1)
EET 83334	carbonaceous C2	2.5	E-7	10(2)
EET 83335	L-6 chondrite	226.9	G-5	9(1)
EET 83336	L-6 chondrite	130.0	H-5	10(2)
EET 83338	H-5 chondrite	26.6	H-5	10(2)
EET 83339	L-6 chondrite	72.7	H-5	10(2)
EET 83340	L-5 chondrite	15.2	B-5	10(2)
EET 83341	LL-6 chondrite	65.0	D-8	10(2)
EET 83342	L-6 chondrite	148.6	?	10(1)
EET 83343	L-6 chondrite	125.1	E-5	10(1)
EET 83344	L-6 chondrite	87.1	H-6	10(2)
EET 83345	L-6 chondrite	11.8	H-6	10(2)
EET 83346	H-5 chondrite	21.5	D-8	10(2)
EET 83347	H-5 chondrite	37.2	C-6	10(2)
EET 83348	L-6 chondrite	299.2	C-5	9(1)
EET 83349	H-5 chondrite	27.5	D-7	10(2)
EET 83350	L-6 chondrite	88.7	E-4	10(2)
EET 83351	H-5 chondrite	80.8	F-8	10(2)
EET 83352	LL-6 chondrite	20.4	D-6	10(2)
EET 83353	L-6 chondrite	53.8	E-4	10(2)
EET 83354	L-6 chondrite	8.4	H-5	10(2)
EET 83355	carbonaceous C2	66.2	C-7	10(2)
EET 83356	L-6 chondrite	18.2	D-6	10(2)
EET 83357	LL-6 chondrite	35.4	B-5	10(2)
EET 83358	L-6 chondrite	25.7	E-7	10(2)
EET 83359	LL-6 chondrite	66.2	H-5	10(2)
EET 83360	H-6 chondrite	40.1	G-7	10(2)
EET 83361	LL-5 chondrite	5.8	C-5	10(2)
EET 83362	H-6 chondrite	10.1	H-5	10(2)
EET 83363	L-6 chondrite	184.7	H-6	9(3)
EET 83364	L-6 chondrite	204.9	E-4	9(3)
EET 83365	L-6 chondrite	157.6	F-7	10(2)
EET 83366	L-6 chondrite	188.5	G-5	10(2)
EET 83367	H-6 chondrite	107.4	C-5	10(2)
EET 83368	L-6 chondrite	50.9	A-4	10(2)
EET 83369	H-5 chondrite	38.9	E-7	10(2)
EET 83370	L-6 chondrite	24.1	B-5	10(2)

Listing of meteorites recovered from the Elephant Moraine Icefield and survey stations (continued)
(1979, 1982, 1984, and 1986 collections).

Meteorite Name	Classification	Weight (g)	Grid Cell	Newsletter
EET 83371	L-6 chondrite	169.9	C-5	10(2)
EET 83372	H-5 chondrite	168.9	B-4	10(2)
EET 83373	H-6 chondrite	158.9	G-7	10(2)
EET 83374	H-6 chondrite	95.8	E-7	10(2)
EET 83375	L-6 chondrite	266.6	D-5	10(2)
EET 83376	howardite	79.3	C-6	9(2)
EET 83377	H-5 chondrite	151.7	C-5	10(2)
EET 83378	L-6 chondrite	212.3	H-6	10(2)
EET 83379	L-6 chondrite	177.4	B-5	10(2)
EET 83380	LL-6 chondrite	118.5	D-4	10(2)
EET 83382	H-6 chondrite	11.6	D-6	10(2)
EET 83383	L-6 chondrite	116.8	H-5	10(2)
EET 83384	L-6 chondrite	21.7	A-4	10(2)
EET 83385	H-6 chondrite	3.9	B-5	10(2)
EET 83386	L-5 chondrite	37.8	D-4	10(2)
EET 83387	L-6 chondrite	80.9	H-5	10(2)
EET 83388	H-5 chondrite	34.7	G-5	10(2)
EET 83389	carbonaceous C2	19.2	E-6	10(2)
EET 83390	iron-octahedrite	15.2	H-5	9(1)
EET 83391	LL-6 chondrite	90.7	D-7	10(2)
EET 83392	L-6 chondrite	163.8	G-4	10(2)
EET 83393	H-6 chondrite	30.0	D-6	10(2)
EET 83394	H-6 chondrite	54.3	H-6	10(2)
EET 83395	L-3 chondrite	65.3	D-6	10(2)
EET 83396	L-6 chondrite	198.3	E-5	10(2)
EET 83397	H-6 chondrite	32.1	C-6	10(2)
EET 83398	L-5 chondrite	67.2	?	10(2)
EET 83399	L-3 chondrite	203.3	G-7	9(1)
EET 83400	H-5 chondrite	112.9	H-5	10(2)
EET 83401	LL-6 chondrite	111.7	F-5	10(2)
EET 83402	H-5 chondrite	50.3	H-6	10(2)
EET 83403	H-5 chondrite	11.7	E-7	10(2)
EET 84300	iron-octahedrite	72.2	G-7	9(1)
EET 84301	L-6 chondrite	75.1	C-5	9(3)
EET 84302	achondrite	59.6	B-4	9(3)
EET 84303	H-5 chondrite	57.5	F-5	9(3)
EET 84304	L-6 chondrite	152.2	F-5	9(3)
EET 84305	LL-6 chondrite	9.8	F-4	9(3)
EET 84306	H-6 chondrite	3.5	C-6	9(3)
EET 84307	L-6 chondrite	5.1	C-6	9(3)
EET 84308	L-6 chondrite	9.3	E-4	9(3)
EET 86800	L-6 chondrite	116.0	H-6	11(1)
EET 86801	L-6 chondrite	82.9	H-6	11(1)
EET 86802	H-4 chondrite	29.6	H-6	11(1)
station 110-E			C-6	
station 111-E			C-6	
station 112-E			D-6	
station 113-E			D-6	
station 114-E			E-6	
station 115-E			F-6	
station 116-E			F-6	
station 118-E			H-6	
station 119-E			H-6	
station 120-E			H-6	
station 121-E			G-5	
station 122-E			G-5	
station 123-E			G-5	
station 124-E			F-6	
station Dr. Suess			D-8	
station Elephant			G-6	

*See explanatory text.

Question mark indicates that location was not documented.

APPENDIX. METEORITE LOCATION MAP AND THEMATIC MAP ORDERING INFORMATION

The icefield maps currently included in the Antarctic Meteorite Location Map Series, their scales, and number of sheets per icefield are shown below.

TABLE A1. Icefield maps currently included in the AMLAMP series.

Icefield	Scale	Sheets
Allan Hills Main	1:10,000	2
Allan Hills Near Western	1:12,500	1
Allan Hills Middle Western	1:25,000	1
Allan Hills Far Western	1:25,000	2
Elephant Moraine	1:12,500	1

Thematic maps are produced according to a requestor's design specifications as described in a thematic map design form. To design a thematic map, the requestor is first asked to specify the icefields to which the design is to be applied by marking the appropriate field. Next, a map title may be supplied that will be included in the legend box of the

specified maps. A requestor is allowed to select up to six thematic definitions and to associate a unique colored symbol with each theme. These symbols will be placed on the specified icefield maps to designate the meteorites that represent each of the selected themes. At present, thematic map parameters are limited to meteorite classifications and meteorite specimen weights, but as information is acquired, terrestrial age options will be made available for map design. Classification theme definitions may be specified explicitly (i.e., "H-5 CHONDRITE") for a narrow scope or by using the wildcard specifier (i.e., "* CHONDRITE") for a broader scope. The wildcard specifier, "*", may appear anywhere and any number of times in a thematic definition. The form and terminology of the *Antarctic Meteorite Newsletter* should be observed when specifying classification theme definitions. Symbol color and type are specified by selecting the desired number from the available colors and types listed at the bottom of the form.

If you would like to order the meteorite location map set or request thematic maps, please complete the Thematic Map Design and/or the AMLAMP Map Request Forms. All maps will be sent rolled in mailing tubes.

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AMLAMP Map Request Form

AMLAMP
 Lunar and Planetary Institute
 3303 NASA Road 1
 Houston, TX 77058-4399
 (713)486-2184

R e q u e s t e d	 B y 	Name and Address	 S h i p 	Name and Address or SAME
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Daytime Telephone: (123) 456-7890 (Very Important!)

Number of Location Map Sets _____ x \$10.00/set - \$ _____
 Number of Thematic Map Sheets _____ x \$10.00/sheet - \$ _____
 (US/Canada or Foreign surface) Shipping and Handling - \$ _____
Total - \$ _____

Please make checks payable to the Lunar and Planetary Institute.
 Foreign air freight rates vary with destination. Call for exact rates.

Thematic Map Design Form

Icefield Sheets	() Allan Hills Main - North () Allan Hills Main - South () Allan Hills Near Western () Allan Hills Middle Western	() Allan Hills Far Western - East () Allan Hills Far Western - West () Elephant Moraine
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Map Title: _____ (22 char. max.)

	<u>Theme Definition</u>	<u>Color No.</u>	<u>Symbol No.</u>
1.	<u>H-3 CHONDRITE</u>	_____	_____
2.	<u>H-4 CHONDRITE</u>	_____	_____
3.	<u>H-5 CHONDRITE</u>	_____	_____
4.	<u>H-6 CHONDRITE</u>	_____	_____
5.	<u>L-* CHONDRITE</u>	_____	_____