FLUCTUATIONS
OF
GLACIERS
1990–1995

(Vol. VII)

A contribution to the
Global Environment Monitoring Service (GEMS)

and the
International Hydrological Programme (IHP)

Prepared by the
World Glacier Monitoring Service (WGMS)

IAHS (ICSI) – UNEP – UNESCO
1998

FLUCTUATIONS OF GLACIERS 1990–1995
with addendas from earlier years

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Paris, IAHS – UNESCO, 1993

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Compiled for the
World Glacier Monitoring Service
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PREFACE

Following the recent Second IPCC Assessment, there has been an escalation in publicity concerning the potential impacts of climate variability and change on the environment. Particular attention has been given to the consequences of climate change on society, especially within the framework of socio-economies. A fundamental societal need is an abundant supply of high quality water. It is now acknowledged within international circles that 'water' will be the critical issue of the 21st century, due to various socio-economic pressures arising from the global increase in population. The prospect of climate variability and change will only enhance further pressures on the diminishing, potable water resources. Thus it is critical to water resources management to have the necessary instruments for predicting and detecting climate change.

Monitoring of the changes in glacier mass balances provides a very sensitive detector of natural and anthropogenic-induced climate variability which complement predictions from General Circulation Models (GCMs). Should significant climate change take place in the long term, the resulting glacier fluctuations will have major impacts both on river regimes downstream and on water resources management. Such aspects are of particular relevance to the continued implementation of the **Fifth Phase of UNESCO's International Hydrological Programme**. Consequently, the publication of Volume VII, 1990–1995, within the Fluctuation of Glaciers series is a timely contribution to the climate change issue. Furthermore this work complements the recent publication of the UNESCO Studies & Reports in Hydrology Series no. 57, entitled *Into the 2nd Century of World Glacier Monitoring: Prospects and Strategies*, and the earlier release of *Glacier Mass Balance Bulletin No. 4 (1994–1995)*. All these publications have been in co-ordination with the *International Commission on Snow and Ice (ICSI)* which assists the IHP-V with the implementation of project 1.3, "Hydrological interpretation of global change predictions". The present Fluctuation of Glaciers volume is also a significant contribution towards *The Second International Conference on Climate and Water*, Espoo, Finland, August 1998.

There are several important messages to the climate change communit found in this volume. Foremost is that mass balances from 33 glaciers reflects continued glacier melting at an accelerated rate. The mean specific net balance (-287 mm) of the corresponding reference glaciers for the five years 1990/91–1994/95 corresponds to an additional energy flux (2–3 Wm^{-2}). It is considered that this flux corresponds to the estimated anthropogenic greenhouse forcing and is slightly higher than the decadal mean of 1980–1990 (-277 mm). These means are, however, strongly influenced by the bias in geographic-weighting towards Alpine and Scandinavian glaciers within the basic network. In that regard, it is appropriate to highlight the recent ICSI initiative in organizing a symposium on Glaciers in the Southern Hemisphere, Melbourne, July 1997, and a corresponding monograph which will be published shortly. Especially pertinent, the contents of the present book also remind us that natural climate variability is also capable of producing dramatic changes when concerning the European alpine glaciers, there was a near 50% reduction in total glacier volume from 1850 to the mid-1970s. Most of this change took place during the second half of the 19th century and the first half of the 20th century during times of relatively weak anthropogenic forcing. Filtering the effects of natural climate variability from those attributed to anthropogenic influences poses one of the principal challenges to the global change scientific community.

The World Glacier Monitoring Service is once again to be congratulated for continuing its efforts in producing this seventh volume in the Fluctuation of Glaciers series under the guidance and persistent efforts of Wilfried Haeberli and his collaborators.

M. Bonell
Chief, Section on Hydrological Processes & Climate
International Hydrological Programme, UNESCO

FOREWORD

Volume VII of the series of publications on the Fluctuations of Glaciers prepared by the World Glacier Monitoring Service covers a period of unprecedented interest in the mass balance of glaciers. As the general public wake up to the possibility of significant anthropogenic climate change within decades, they have realized that small glaciers are sensitive indicators of present climatic trends. The wasting away of the local glacier brings home the impact of climate warming to many non-scientists in a very vivid way. They want to know more – as do the world leaders who have to make difficult decisions balancing economic and environmental considerations .

The information gathered for this publication allows scientists to give a balanced report of the health of glaciers world-wide. Those we know about are melting at an accelerating rate (except in parts of Scandinavia) and their meltwater makes an ever-greater contribution to sea-level rise. However, there are many parts of the world where far too few glaciers are monitored. Over the last five years glaciologists have developed improved methods of deducing the mass balance of unmeasured glaciers, often using data provided by the WGMS to test and improve their modelling techniques. In this way the predictions of the effects of climate change on glaciers world-wide are improved.

The WGMS is to be congratulated on the production of this volume, which makes data from all over the world available to the glaciological community. The printed maps and tables complement data held in electronic form which, we must remember, is not always easily accessible for some researchers. Above all the efforts of the WGMS to ensure that valuable data are collected centrally has a stimulating effect on the community and encourages the field scientist to continue with the important, but sometimes lonely task of collecting glacier fluctuation data.

The work of the WGMS continues the long tradition of glacier monitoring which began in 1894. It is supported enthusiastically by ICSI (The International Commission on Snow and Ice) and we congratulate Professor Haeberli on bringing another volume in the valuable Fluctuations of Glaciers series to publication.

M. Kuhn
President, ICSI 1991–1995

E. M. Morris
President, ICSI 1995–2001

PRELIMINARY REMARKS AND THANKS

The present Volume VII of the "Fluctuations of Glaciers" mainly concerns the time period from 1990 to 1995. It was prepared by the World Glacier Monitoring Service (WGMS) and continues the corresponding series of publications which contain internationally collected, standardized data on current changes in glaciers throughout the world, i.e.:

Vol. I : Fluctuations of Glaciers 1959–1965 (P. Kasser)
Vol. II : Fluctuations of Glaciers 1965–1970 (P. Kasser)
Vol. III : Fluctuations of Glaciers 1970–1975 (F. Müller)
Vol. IV : Fluctuations of Glaciers 1975–1980 (W. Haeberli)
Vol. V : Fluctuations of Glaciers 1980–1985 (W. Haeberli and P. Müller)
Vol. VI : Fluctuations of Glaciers 1985–1990 (W. Haeberli and M. Hoelzle)

The World Glacier Monitoring Service was formed in 1986, combining the then existing Permanent Service on the Fluctuations of Glaciers (PSFG) with the Temporary Technical Secretariat for the World Glacier Inventory (TTS/WGI). It is one of the permanent services of the Federation of Astronomical and Geophysical Services of the International Council of Scientific Unions (FAGS/ICSU), operating at the University of Zurich and the ETH Zurich under the auspices of the International Commission on Snow and Ice of the International Association of Hydrological Sciences (ICSI/ IAHS). It is primarily funded by these institutes and by the Division of Water Sciences within UNESCO and FAGS/ICSU. The objective of the publication of the "Fluctuations of Glaciers" at 5-yearly intervals is to reproduce a global set of data which

– affords a general view of the changes,
– encourages more extensive measurements,
– invites further processing of the results,
– facilitates consultation of the further sources, and
– serves as a basis for research.

In fact, this standardized data set should be regarded as a working tool for the scientific community, especially concerning the fields of glaciology, climatology, hydrology, and quaternary geology. The following guides and instructions are most relevant for the present volume (Volume VII) of the "Fluctuations of Glaciers":

1. Variations of Existing Glaciers. A Guide to International Practices for their Measurement. Technical Papers in Hydrology No. 3, UNESCO 1969, which has in part been superseded and made more specific by: Instructions for Submission of Data for "Fluctuations of Glaciers 1990–1995", issued by the WGMS in June 1996 (cf. also the Appendix in the present volume).

2. Perennial Ice and Snow Masses. A Guide for Compilation and Assemblage of Data for the World Glacier Inventory. Technical Papers in Hydrology No. 1, UNESCO 1970, which has in part been superseded by: Müller, F., Caflisch, T. and Müller, G. (1977):
   Instructions for Compilation and Assemblage of Data for a World Glacier Inventory,

and by: TTS/WGI (1983): Guidelines for Preliminary Glacier Inventories, both issued by the former Temporary Technical Secretariat for the World Glacier Inventory, now WGMS, Department of Geography, University of Zurich and VAW/ETH Zurich.

3. Combined Heat, Ice and Water Balances at Selected Glacier Basins.

   Part I: A Guide for Compilation and Assemblage of Data for Glacier Mass Balance Measurements.

   Part II: Specifications, Standards and Data Exchange. Technical Papers in Hydrology No. 5, UNESCO 1970 and 1973.

The present volume could be completed thanks to the cooperation and quick response from the national correspondents and their collaborators. Besides this work of glaciologists all over the world, the main burden of the operation had this time to be borne by the Department of Geography, University of Zurich. The help and assistance of a number of colleagues at the Laboratory of Hydraulics, Hydrology and Glaciology (VAW) is most gratefully acknowledged. M. Honegger (text editing), especially contributed to the achievement and always helped to overcome major and minor problems. M. Bonnell (UNESCO) as well as the presidents of ICSI, M. Kuhn (Innsbruck) and E. Morris (Cambridge), assisted in ensuring proper international administration and funding. K. Echelmeyer (Fairbanks), M. Kuhn (Innsbruck), M. F. Meier (Boulder), J. Oerlemans (Utrecht), G. Østrem (Oslo), V.V. Popovnin (Moscow), L. Reynaud (Grenoble) and R. S. Williams (Reston) are acting as scientific consultants to the WGMS, covering the important fields of energy balance at the glacier surface, glacier dynamics, modelling of glaciers, glacier mass balance, glacier inventories, statistical analysis of glacier fluctuations and remote sensing of perennial surface ice. S. Braun-Clarke refined the English of the texts.

Printing of the present volume was made possible by a generous contribution from the Swiss Academy of Sciences (SAS).

TABLE OF CONTENTS

LIST OF ANNEXED MAPS

CHAPTER 1 **INTRODUCTION**

1.1 Preparation of Volume VII of "Fluctuations of Glaciers"

Immediately after the termination of the last year to be reported, preparation of the present volume started in 1996 with the distribution of data sheets and instructions to the national correspondents. In order to ensure a maximum of continuity and comparability within the published data series, only minor changes were introduced concerning the format and content of Volume VII.
The designation U.S.S.R. is not used for the present volume anymore, however the abbreviation SU in the political unit is maintained for C.I.S. to faciliate comparisons with former volumes of "Fluctuations of Glaciers". Information relating to special events such as glacier surges, drastic retreat of calving glaciers, glacier floods, ice avalanches and eruptions of glacierized volcanoes was again collected. Such compilations are important with respect to the exchange of experience with natural hazards in cold regions and may be considered as a contribution to the International Decade for Natural Hazard Reduction.

Information is most complete on the original data sheets where, for example, specific remarks pertinent to the measurements of individual glaciers can sometimes be found. Other information such as the dates of individual measurements was stored in the WGMS data base – containing the Tables A, B, BB, C, CC in data bank format – but is not printed in this volume. This means that information more complete than the one printed in the tables is available. Computer work was done using facilities at the Department of Geography at the University of Zurich and at the Swiss Federal Institute of Technology, Zurich. Proofs of the tables were sent to the national correspondents in autumn 1997.

The present Volume VII of the "Fluctuations of Glaciers" contains information on 645 glaciers from 28 countries (including Antarctica). Data on "Variations in the Positions of Glacier Fronts" during the period 1990–1995 were received for 544 glaciers in 21 countries, with "Addenda from Earlier Years" for 61 glaciers in 9 countries. "Mass Balance Study Results – Summary Data" concerning the period 1990–1995 were submitted for a total of 88 glaciers in 16 countries with "Addenda from Earlier Years" for 14 glaciers in 8 countries. Detailed information on "Mass Balance versus Altitude" was made available for 44 glaciers in 10 countries and data relating to "Changes in Area, Volume and Thickness" is presented for 8 glaciers in 5 countries. Finally, index measurements or special events were reported from 44 glaciers in 13 countries. Interesting observations have newly become available for Chile and Pakistan, and a mass balance programme was recently initiated in Bolivia.

A section was again included to represent important information which does not fit into the standardized format of the tables. It contains index measurements on remote glaciers and the already mentioned special events.

Following a well-established tradition, 16 special glacier maps are included in the back pocket of this volume. The World Glacier Monitoring Service is again grateful for the fact that most of these maps were donated. Brief comments on them can be found in a special text section of the present volume.

All references mentioned within the present volume are listed at the end of the text. The Appendix immediately before Table A contains explanations of the data sheets which were used for the preparation of this volume.

1.2 Organization of the present volume

The following types of data are presented in this volume:

Table A	General Information on the Observed Glaciers
Table B	Variations in the Position of Glacier Fronts, 1990–1995
Table BB	Variations in the Position of Glacier Fronts – Addenda from Earlier Years
Table C	Mass Balance Summary Data, 1990–1995
Table CC	Mass Balance Summary Data – Addenda from Earlier Years
Table CCC	Mass Balance versus Altitude for Selected Glaciers
Table D	Changes in Area, Volume and Thickness
Table F	Index Measurements and Special Events presented in Chapter 7

Sources of data and comments can be found in Chapters 2 to 7. Within each data type, the glaciers are organized according to the country where they occur. Table A provides the user not only with general information on the glaciers of a particular country or region, but also lists which data are available for these glaciers in other tables. An alphabetic index of glaciers is given at the end of this volume to allow easy location of the data for any one glacier within the various tables.

The identification system for glaciers consists of:

(1) a name of up to 15 alphabetical and numerical characters,
(2) a PSFG number of five digits with an alphabetical prefix denoting the country,

Although in some cases it was necessary to abbreviate the names of glaciers, it should always be possible to compare data for any particular glacier in the present volume with data in previous volumes. The PSPG number helps to identify glaciers with the same, unknown or changing names: the number has to remain the same for every glacier through all the volumes of the "Fluctuations of Glaciers". The numbers were in most cases given to glaciers in some historically developed sequence and may therefore appear to be somewhat non-systematic.

It is strongly recommended that all data tabulated in Tables A to D be used in consultation with the relevant sections in the text; in the case of Table F, the data are given within the text of Chapter 7. Furthermore, when citing data from this volume, references to the original sources of the data – given in the relevant chapters of the text – should be quoted wherever possible.

The order in which data from the different countries are presented, together with the corresponding prefixes, is shown in the following table:

Country	***Prefix***	***Country***	***Prefix***
Canada	CD	Switzerland	CH
U.S.A.	US	Austria	A
Mexico	MX	Italy	I
Colombia	CO	Spain	E
Ecuador	EC	Kenya	KN
Peru	PE	Poland	PL
Bolivia	RB	C.I.S.	SU
Chile	RC	China	CN
Argentina	RA	India	IN
Greenland	G	Pakistan	PK
Iceland	IS	Nepal	NP
Norway	N	Japan	J
Sweden	S	New Zealand	NZ
Germany	D	Antarctica	AN
France	F		

CHAPTER 2 **GENERAL INFORMATION ON THE OBSERVED GLACIERS**

2.1 The Parameters

The parameters published constitute a useful minimum of information about each observed glacier. Emphasis is placed upon basic information available from a national glacier inventory carried out according to internationally agreed specifications. A list of the parameters given in Table A, together with their abbreviations as used in the table can be found on the cover page of Table A. The 3-digit classification of each glacier (CODE) is based on the following scheme (UNESCO 1970):

Digit 1: Primary Classification

0	Miscellaneous
1	Continental Ice
2	Ice field
3	Ice Cap
4	Outlet glacier
5	Valley glacier
6	Mountain glacier
7	Glacieret or snowfield
8	Ice shelf
9	Rock glacier

Digit 2: Form

0	Miscellaneous
1	Compound basins – two or more glaciers coalescing
2	Compound basin – two or more accumulation basins
3	Simple basin
4	Cirque
5	Niche
6	Crater
7	Ice apron
8	Group
9	Remnant

Digit 3: Frontal Characteristics

0	Miscellaneous
1	Piedmont
2	Expanded foot
3	Lobed
4	Calving
5	Coalescing, non contributing
6	Irregular, mainly clean ice

7	Irregular, mainly debris-covered
8	Single lobed, mainly clean ice
9	Single lobed, mainly debris-covered

2.2 Sources of Data and Comments for the Various Countries

The names of the individual investigators and their sponsoring agencies are given for each country in Chapters 3 and 4. The addresses of the sponsoring agencies and organizations holding original data are given in Chapter 6.

Canada (CD)

The entire data with comments and an extensive bibliography are contained in a special report by Ommanney (1991). Data on glaciers in this section are mostly derived from the Canadian National Topographic Map Series (NTS) at a scale of 1:50,000, in conjunction with air photos.

All of Canada has been flown with low-level aerial photography suitable for mapping at a scale of 1:50,000. In several cases special air-photo missions have been organized for the mapping of glaciers at a scale of 1:10,000 or better. Flight-line information and the individual prints are available from the:

National Air Photo Library,
Surveys, Mapping and Remote Sensing Sector,
Energy, Mines and Resources Canada,
615 Booth Street,
Ottawa, Ontario, K1A 0E9

The Surveys and Mapping Branch has virtually completed its mapping of Canada at a scale of 1:50,000 and the updating of the 1:250,000 scale NTS sheets. Many of the new maps are available in digital form. Although revisions to reflect changes in human occupancy may use satellite imagery, no policy yet exists for updating the outline of changing physical features, such as glaciers. Maps at the various metric scales and indices are available from the:

Canada Map Office,
Surveys, Mapping and Remote Sensing Sector,
Energy, Mines and Resources Canada,
130 Bentley Avenue,
Ottawa, Ontario, K1A 0E9

In most cases, the individual who compiled the data sheet is the one in charge of glacier data and the person from whom it should be requested.

The glacier number (PSFG number) allocation for Canadian glaciers has been based on an initial alphabetic division with the first two digits corresponding to a particular letter of the alphabet, i.e., A = 01.. to Z = 26.. and with unnamed features starting at 50... The last two digits have been assigned on a scale of 1–99 based on the relative position of the glacier name within its particular alphabetic block, as determined from the latest listing of named glaciological features in Canada. References: Demuth 1997a, 1997b; Demuth and Munro 1995; Demuth and Eng 1997; Demuth et al. 1997, Demuth et al. 1998 (in press); Ommaney 1995.

U.S.A. (US)

Data for 14 glaciers were submitted by A.G. Fountain of Portland State University (PSU). As in previous volumes, the first digit of the Glacier Number (PSFG number) denotes the state where the glacier is located; the second digit denotes the range, the mountains or the specific mountain where the glacier lies. The last two digits are the number assigned to an individual glacier within a particular state and mountain range (or mountain):

Digit 1:	0,1 Alaska	0001–0199	Brooks Range
		0200–0399	Alaska Range, Aleutian Range
		0400–0599	Kenai Mountains
		0600–1099	Chugach Mountains
		1100–1299	Wrangell Mountains
		1300–1799	St. Elais Mountains
		1800–1999	Coast Mountains
Digit 2 :	Washington	2000–2099	North Cascade Range
		2100–2199	Olympic Range
Digit 4:	California	4000–4100	Mount Shasta, Mount Lassen

References for Overlord and Wedgemont Glaciers: Ricker and Tupper 1996.

Mexico (MX)

Data on Ventorillo Glacier was submitted by H. Delgado-Granados, Instituto de Geofísica, Universidad Nacional Autónoma de Mexico, Mexico.

Colombia (CO)

Revised information on the glacier covering the Nevados del Ruiz, Santa Isabel and Tolima was submitted by L. Guarnizo, independent researcher at the IMIP programme "Ice and Magma Interactions Processes" in Manizales.

Ecuador (EC)

Data on Antizana-15 Glacier was submitted by R.H. Galárraga, Escuela Politécnica Nacional, Quito, Ecuador. References: Sémiond et al. 1997.

Peru (PE)

Data for 3 Peruvian glaciers were received from M. Zamora and A. Ames from the

Department of Glaciology and Hydrology, Hidrandina S.A. (HID) in Huaraz.

Bolivia (RB)

Data for Chacaltaya and Zongo Glaciers were submitted by B. Francou (CNRS, Mission ORSTOM).

Chile (RC)

Information on 28 glaciers was sent by G. Casassa from Byrd Polar Research Center, Ohio State University (BPRC). The Northern Patagonian Icefield data are from Aniya (1988, 1992); they replace earlier inventory information (Valdivia 1979).

Argentina (RA)

In the Central Andes of Argentina, the Río del Plomo glacier fluctuations were studied by Llorens and Leiva (1995) during the period 1974–1992. In the Aconcagua region, Videla (1997), has studied the fluctuations of Glaciar Horcones Superior from the past century to recent decades. Mass balance measurements restarted in 1991 by Leiva and Cabrera (1996) on the Piloto and Alma Blanca glaciers. Results of glacier length fluctuations of the Agua Negra Glacier in 1981, 1983, 1984, 1987, 1988, 1993 and 1996 were presented by Leiva (1997). Glacier thickness of the Agua Negra Glacier was obtained by Maturano et al. (1997). Frías Glacier fluctuations on Mount Tronador in the Río Negro region (Villalba et al. 1990) were established by different methods. The Glaciological Research Projects between Japan, Argentina and Chile in Patagonia – 1990 and 1993 – have provided valuable data relating to glacier fluctuations of the Upsala and Moreno glaciers by Aniya and Skvarca (1992); Aniya et al. (1997); Naruse et al. (1992); Malagnino and Strelin (1992). Heat balance characteristics and meteorological conditions were measured at Moreno Glacier by Takeuchi et al. (1995). Espizua and Bengochea (1990) summarize results from the analysis of satellite imagery concerning the 1985 surge of Grande del Nevado Glacier (Mendoza).

Greenland (G)

Data on 5 glaciers and ice caps was submitted by A. Weidick, (GEUS), Denmark.
References: Weidick et al. 1996.

Iceland (IS)

Data on 42 glaciers were submitted by O. Sigurdsson of the Hydrological Service, National Energy Authority (OS).

Norway (N)

Data on Norwegian glaciers including Svalbard were received from J.O. Hagen, Department of Physical Geography, University of Oslo.
Data for Hans Glacier were submitted by J. Jania, B. Gadek and P. Glowacki from

University of Silesia in Sosnowiec (SUP), Poland.
References: Elvehøy et al. 1997; Eriksson et al. 1993; Glazovsky et al. 1992; Hagen 1996; Jania 1995; Jania et al. 1996; Nesje et al. 1995; Pourchet et al. 1995.

Sweden (S)

Data for 20 Swedish glaciers were received from P. Holmlund of the Department of Physical Geography, Stockholm University (NGSU), cf. also the overview by Schytt (1993). The Glacier Number (PSFG number) for the Swedish glaciers are the last four digits of the IHD index numbers.
References: Bodin 1993a, 1993b; Grudd 1992; Grudd and Bodin 1991; Holmlund 1991, 1993, 1995a, 1995b, Holmlund and Schytt 1995, Holmlund et al.1996; Hooke et al. 1996; Jansson 1994, 1995, 1996; Stroeven and Wal 1990.

France (F)

Data for 7 French glaciers were received from L. Reynaud of the Laboratory of Glaciology and Environmental Geophysics in Grenoble (CNRS).
References: Valla 1995; Vincent and Vallon 1997.

Switzerland (CH)

Data on 120 Swiss glaciers were compiled by M. Aellen, M. Hoelzle, S. Suter of the Laboratory of Hydraulics, Hydrology and Glaciology (VAW) at the Swiss Federal Institute of Technology (ETH) and R. Frauenfelder of the Division of Geography at the University of Zurich. As with Vol. IV, V and VI the main source of general information was the Swiss Glacier Inventory by Müller et al. (1976), with an exception made for minimum altitude values which are updated to the most recent survey (1990 in most cases).

Austria (A)

Data for a total of 126 Austrian glaciers were sent to the WGMS by G. Patzelt of the Institute for High Mountain Research in Innsbruck (IHMR).

Italy (I)

Data for 77 Italian glaciers were received from G. Zanon of the Department of Geography, University of Padua (DGUP).

Spain (E)

Data for the Maladeta glacier, the only instrumented glacier in the Pyrenees, was submitted by E. Martínez de Pisón, Departamento de Geografía Física, Universidad Autónoma de Madrid (UAM). The names of individual investigators are mentioned in Chapter 4. References: McGregor et al. (1995). Interesting information about historical glacier changes is compiled in Grove and Gellatly (1995).

Kenya (KN)
Data for 11 glaciers on Mount Kenya were received from S. Hastenrath of the Department of Atmospheric and Oceanic Sciences, University of Wisconsin, U.S.A. (UWAOS). The reported values are updated from the glacier inventory by Hastenrath (1984, cf. Hastenrath et al. 1989) and represent the situation in 1987.
Further references: Hastenrath 1991a, 1991b, 1992a, 1992b, 1993, 1996; Hastenrath and Chinn 1996; Hastenrath and Kruss 1992a, 1992b; Hastenrath et al. 1995; Hastenrath et al. 1997; Rostom and Hastenrath 1995; cf. Young and Hastenrath (1991).

Poland (PL)
Data for glacierets in the Polish Tatra Mountains were submitted by A. Wislinski (MPG) in Lublin.

Slovakia (SK)
Data for snow patches in the Slovakian Tatra Mountains were submitted by L. Litwin and T. Kolodziej from the University of Silesia in Sosnowiec (SUP), Poland. The data result from the inventory of perennial snow patches carried out between the 1st and 15th of September 1994. Time of observation is at the end of the ablation period.The data will be processed for the next volume of “Fluctuations of Glaciers”.

C.I.S. (former SU)
The data for 29 glaciers comprising the C.I.S. (ex-USSR) contribution to Volume VII were collected, prepared and submitted by the Glacier Monitoring Working Group of C.I.S. Glaciological Association chaired by D.G. Tsetkov and consisting of G.B. Osipova and V.V. Popovnin. Results from observations undertaken by nine institutions of the former USSR (academies of sciences, state universities, hydrometeorological organizations) are summarized.

Political and, particularly, economical changes in the former Soviet Union that started in the early 1990s influenced dramatically both field observations and the procedure of centralized compilation fo the data set. This led to a drastic reduction in the number of glaciers under investigation and the amount of institutions involved in the glacier monitoring programme. Unfortunately, observation series are broken off for a number of Central Asian glaciers – e.g., on the famous surging Medvezhiy Glacier in the Pamirs, on Shumskiy Glacier in the Dzhungarian Alatau, remarkable for its long mass balance and surface kinematics time series, on Golubin Glacier, Tien Shan, etc. Information on frontal fluctuations for the glaciers of the southern slope of the Caucasus, which used to be regularly delivered by Georgian glaciologists, were not obtained anymore.
As a result and in contrast to the previous pentads when data sets for the Soviet Union constisted of ca. 100 glaciers, information on only 29 glaciers over the ex-USSR territory is presented: Caucasus – 12 glaciers, Pamir-Alai – 1, Tien Shan – 5, Dzhungarian Alatau – 2, Altai – 8 and Kamchatka – 1. Data on both mass balance and frontal fluctuations deal with 11 of them, and 16 glaciers are monitored only with respect to the position of their fronts.

For Kara-Batkak, elevation data are corrected, with respect to former FoG volumes, being based on the new topographic map 1:25,000, which has been drawn using materials from the last aerial photogrammetric survey in 1981. Similarly, elevation and area data for Muravlev are also corrected, complying now with the values of the USSR Glacier Catalogue.

Pakistan (PK)
Information on 13 glaciers was received from W. Kick (†), Regensburg/Germany, and K. Hewitt, Wilfried Laurier University, Waterloo/Canada (WLU). The written form of glacier names can be variable, e.g., Chongra is also known as Chungpar/Tashing.

China (CN)
Data on Urumqihe and Xiao Dongkzmadi glacier were sent to the WGMS by Liu Shiyin of the Lanzhou Institute of Glaciology and Geocryology, Chinese Academy of Sciences (LIGG).

Nepal (NP)
Data on 7 glaciers from the Dudh Kosi basin, on Yala Glacier in the Langtang Valley and on Rikha Samba Glacier in the Dhaulagiri Range were submitted by Y. Ageta of Institute for Hydrospheric-Atmospheric Sciences at Nagoya University, Japan (IHAS).
Data on Thulagi Glacier was submitted by J. Hanisch (BGR), Hannover, Germany.
Reference: Kadota et al. 1992.

Japan (J)
Information on Hamaguri Yuki – a perennial snow patch in Japan – was sent by Y. Ageta of the Institute for Hydrospheric-Atmospheric Sciences at Nagoya University (IHAS).

New Zealand (NZ)
Data for 82 New Zealand glaciers was received from T.J. Chinn of Alpine and Polar Processes Consultancy, Dunedin. References: Chinn 1991, 1994, 1995, 1996a, 1996b, 1998a (in press), 1998b (in press); Fitzharris et al. 1997; Lamont et al. 1998 (in press).

Antarctica (AN)
Data for 8 Antarctic glaciers were submitted by T.J. Chinn of Alpine and Polar Processes Consultancy, Dunedin.

CHAPTER 3 **VARIATIONS IN THE POSITION OF GLACIER FRONTS 1990–1996 AND ADDENDA FROM EARLIER YEARS (TABLES B AND BB)**

3.1 The Data

Data relating to the position of glacier fronts are given in Table B for the period 1990–1995. The data for periods preceding 1990 which were not included in earlier volumes of the series are given in Table BB; in some cases Table BB also gives data which were reported in earlier volumes but which have now been corrected or updated.

A list of the type of data given in each of the Tables B and BB, together with an explanation of the abbreviations and symbols used, can be found on the cover sheet of each table. Quantitative data represent the variation in the position of the glacier front in meters. Qualitative data are also given for cases where no measurements were made although there was some frontal activity observed in the reported period:

ST = glacier appears to be stationary;
+X = glacier appears to be in advance;
- X = glacier appears to be in retreat;
SN = glacier tongue is covered with snow, making the survey impossible.

In all cases, the qualitative data should refer to the preceding year for which either quantitative or qualitative data are available. On the other hand, quantitative data following a series of qualitative observations should be understood as referring to the whole period since the last quantitative measurement.

The data given in Table B are not homogeneous with respect to the method of observation used. In some cases, the measurements are made by regular annual or biennial surveys following methods similar to those recommended by the former Glacier Commission of the Swiss Academy of Sciences (IAHS/UNESCO 1967). In other cases, the mea-surements are more sporadic or casual and are often based upon photogrammetric methods rather than on theodolite survey. The accuracy of the data will rarely be better than about +0.5m and may be much worse, depending on the method used.

Dates of survey are omitted from Table B simply because of shortage of space. In almost all cases it can be assumed that the surveys are made at or near the end of the balance year, i.e., in the boreal or austral autumn seasons. Deviation from a time interval of 365 days between annual surveys will cause errors in the calculation of annual rates of changes, but they will usually lie within the limit of errors caused by other factors.

3.2 Sources of Data and Comments for the Various Countries

Canada (CD)
Data provided on the Overlord and Wedgemount Glaciers are – as reported previously – a continuation of the work undertaken in a voluntary collaboration between K. Ricker and

B. Tupper. The National Hydrology Research Institute (NHRI) (M.M. Brugman), Parks Canada and BCH have re-established periodic terminus variation surveys at the Athabasca, Saskatchewan and Illecillewaet Glaciers. New data referenced on historical records has been generated but has not yet been submitted.
Newer measurements conducted by Memorial University of Newfoundland (MUN/G) (Jacobs et al. 1997) have updated the position of the northwest and southern margins of the Barnes Ice Cap. Data is available but not yet submitted.

U.S.A. (US)
Terminus variation data for 5 glaciers are given in Table B. The majority of the terminus variations were determined from ground measurements and a few from photographs.

Sources of data and sponsoring agencies for the U.S. glaciers in the order in which they appear are: Middle Toklat, Cantwell – P. Brease (NPSD); Blue – H. Conway and C. Raymond (UW); South Cascade – R. Krimmel (USGST); Variegated – B. Rabus, K. Echelmeyer (UA).

Colombia (CO)
Data for Nereidas Glacier and addenda from earlier years for 8 glaciers were submitted by L. Guranizo (INGEOMINAS), Manizales, Colombia.

Bolivia (RB)
Frontal variation for Chacaltaya Glacier and Zongo Glacier are given in Table B. Method C was applied for both glaciers. Data was submitted by B. Francou (CNRS, Mission ORSTOM)

Peru (PE)
Individual investigators for the 3 Peruvian glaciers listed in Table B together with their sponsoring agencies are:

Broggi – A. Ames, M. Zamora (HID), A. Valverde (EP); Uruashraju and Yanamarey – A. Ames and A. Valverde (EP).
A study on the changes of Glaciar Santa Rosa in the Cordillera Raura is presented by Ames and Hastenrath (1996).

Chile (RC)
The inventory data on the glaciers of the Southern Patagonia Icefield are based on the work of Aniya et al. (1997). Glacier variations at the Southern Patagonia Icefield for the period 1944–1986 are taken from Aniya et al. (1997). Data were submitted by Gino Cassassa (Universidad de Magallanes, Punta Arenas) and Andrés Rivera (Universidad de Chile, Santiago).

Argentina (RA)
Addenda from earliers years for Frías glacier was submitted by G. Casassa (BPRC, cf. Chile).

Iceland (IS)
Frontal variation for 41 Icelandic glacier tongues are given in Table B. Method C was employed for all glaciers.

The individual investigators are:
Gígjökull, Hagafellsjökull and Jökulkrókur – Theodór Theodórsson; Sídujökull – Björn Indridason; Hyrningsjökull – Hallsteinn Haraldsson; Kaldalónsjökull – Indridi Adalsteinsson; Gljúfurárjökull – Chris Caseldine; Sólheimajökull – Valur Jóhannesson; Öldufellsjökull – Gissur Jóhannesson; Skeidarárjökull – Eyjólfur Hannesson; Skeidarárjökull E and Morsárjökull – Bragi Thórarinsson; Leirufjardarjökull – Sólberg Jónsson; Múlajökull and Nauthagajökull – Leifur Jónsson; Reykjafjardarjökull – Gudfinnur Jakobsson; Skaftafellsjökull, Svínafellsjökull, Virkisjökull and Falljökull – Gudlaugur Gunnarsson; Kvíárjökull, Hrútárjökull, Fjallsjökull and Breidamerkurjökull W – Steinn Flosi Björnsson and Helgi Björnsson; Breidamerkurjökull E – Steinn Thórhallsson; Hoffelsjökull – Thrúdmar Sigurdsson; Tungnaárjökull – Haflidi B. Hardarson; Kverkjökull – Oddur Sigurdsson; Brókarjökull, Skálafellsjökull, Fláajökull – Eyjólfur Gudmundsson and Oddur Sigurdsson.

Norway (N)
Frontal variation data for 11 glaciers are given in Tables B and BB. The individual investigators are:
Engabreen, Hellstugubreen, Nigardsbreen – unspecified members of NVE; Austerdalsbreen, Brigsdalsbreen, Faabergstølsbreen, Stegholtbreen, Leirbreen, Storbreen, Styggedalsbreen – NPI. Hansbreen – J. Jania, L. Kolondra and B. Gadek (SUP).

Sweden (S)
Frontal variation data for 18 Swedish glaciers are given in Table B. All investigations were carried out under the responsibility of the NGSU and sponsored by NFR, NGSU and KVA; the ground survey method was used exclusively.

The individual investigators are:
Partejekna – M. Nyman; Karsojietna – A.Bodin; Unna and Stour Räitaglaciären – E. Huss; all other glaciers – P. Holmlund.

France (F)
Frontal variation data are given in Table B for 6 French glaciers. The work was carried out by the “Alpine Glaciers” group at the Laboratory of Glaciology and Environmental Geophysics in Grenoble, under the sponsorship of the CNRS.

Switzerland (CH)

Frontal variation data for 103 Swiss glaciers are given in Table B (cf. Aellen 1987, 1988, 1989, 1990, 1991; PSFG Nos. 108, 110, 112, 113, 115, 116 are not included). The programme of observations, largely supported by the new Swiss Glaciological Commission, is supervised by the VAW; many of the measurements are carried out in cooperation with various Cantonal Forestry Services, hydro-electric power companies or private persons. Individual observers involved in this programme are as follows:
VAW – M. Aellen (Bis, Fiescher, Grosser Aletsch, Oberaletsch, Martinets, Mittelaletsch, Pierredar, Trift, Rosenlaui), W. Schmid und H. Bösch (Tälliboden, Ofental, Schwarzberg, Allalin, Kessjen, Ried, Findelen), M. Funk and H. Bösch (Gries, Silvretta, Rhône, Mutt, Zmutt); GIETH – U. Steinegger (Limmern, Plattalva); Forces Motrices de Mauvoisin – Leupin AG (Giétro), Ch. Wuilloud (Corbassière); Forestry Service of Canton Valais – U. Andenmatten (Fee), S. Walther (Gorner), M. Borter (Kaltwasser, Rossboden, Lang), V. Bregy (Zinal, Moming), P. Onouès (Moiry), J. Guex (Valsorey, Tseudet, Boveyre, Saleina), M. Pitteloud (Cheillon, En Darrey, Grand Dèsert, Mt. Fort, Tsanfleuron), M. Torrent (Ferpècle, Mt. Miné, Arolla, Tsidjiore Nouve), A. Tscherrig (Turtmann, Brunegg, Bella Tola); Forestry Service of Canton Vaud – J.-P. Besençon (Sex Rouge, Prapio), J.-P. Marlètaz (Paneyrosse, Grand Plan Névé); Forestry Service of Canton Bern – Chr. von Grünigen (Rätzli), R. Straub (Gauli, Stein, Steinlimmi), U. Vogt (Gamchi, Blümlisalp, Alpetli, Schwarz, Lämmern), R. Zumstein (Eiger, Tschingel); Forestry Service of Canton Glarus – Th. Rageth and B. Zweifel (Sulz); Forestry Service of Canton Obwalden – R. Imfeld (Firnalpeli, Griessen); Forestry Service of Canton St. Gallen – A. Hartmann (Pizol, Sardona); Forestry Service of Canton Graubünden – Chr. Barandun, F. Juvalta (Porchabella), A. Colombo, P. Berchier (Palü), R. Danuser (Vorab), O. Hugentobler (Paradies, Suretta), H. Klöti (Punteglias), J. Könz (Tiatscha), C. Mengelt, G. Bott (Calderas, Forno, Roseg, Tschierva, Morteratsch), B. Parolini (Lenta), L. Rauch (Sesvenna, Lischana), A. Sialm (Lavaz), J. Stahel (Verstankla); Forestry Service of Canton Ticino – C. Valeggia (Basodino, Val Torta, Cavagnoli, Corno, Bresciana); Forestry Service of Canton Uri – P. Kläser (Kehlen, Rotfirn, Wallenbur), B. Annen (Griess), J. Marx (Brunni, Tiefen, St. Anna), M. Planzer (Damma), W. Tresch (Hüfi); Oberhasli hydro-electric power plant – Flotron AG (Oberaar, Unteraar); private investigators – J.-L. Chabloz (Otemma, Mt. Durand, Breney), H. Boss jun. (Ober Grindelwald, Unter Grindelwald), A. Godenzi (Cambrena, Paradisino), E. Hodel (Ammerten), P. Mercier (Trient), H.P. Klauser (Biferten, Glärnisch).

Austria (A)

Frontal variation data for Austrian glaciers are given in Table B. The sponsoring agency for all these investigations is the Austrian Alpine Club (OEAV).

Italy (I)

Frontal variation data for 73 Italian glaciers are given in Table B. The sponsoring agency for these observations is the Comitato Glaciologico Italiano (CGI, Italian Glaciological Committee) in Turin, with financial support from the Consiglio Nazionale delle Ricerche (CNR, National Research Council) and the Ministero dell’Università e della Ricerca Scientifica e Tecnologica (MURST, Ministry of Universities and Scientific and Technological Research) in Rome, and with the collaboration of the Club Alpino Italiano (CAI).

The individual investigators for the glaciers listed in Table B are as follows:
Agnello – M. Rolfo; Alta, Antelao Sup., Antelao Inf., Cevedale, Cristallo, Forcola, Lunga (Vedr.), Serana (Vedr.), Ultima (Vedr.) – G. Perini; Amola, Mandrone, Nardis, Niscli, Presanella – F. Marchetti and other observers CAI; Andolla Nord, Aurona, Belvedere, Hohsand Sett. – A. Mazza; Barbadorso D., Fontana Occ., Vallelunga – G. Zanon; Basei – F. Fornengo, L. Mercalli; Bessanese – F. Rogliardo; Brenva, Lex Blanche, Pré de Bar – A. Cerutti, A. Fusinaz; Caspoggio – G. Casartelli;Chavannes – P. Moreni, A. Viotti; Collalto, Gigante Centr., Gigante Occ., M. Nevoso Occ., Sassolungo Occ. – G. Cibin; Croda Rossa, Tessa – M. Meneghel; Dosdé Or. – A. Galluccio; Dosegù – A. Galluccio, A. Pollini; Goletta – F. Pollicini; Fellaria Occ. – G. Catasta, M. Comi; Gran Pilastro, Marmolada, Neves Or., Quaira Bianca – U. Mattana; Lana, Rosso Destro, Valle del Vento – R. Serandrei Barbero; Lauson – A. Morino, Lys – W. Monterin; Malavalle, Pendente – G. Franchi; Moncorvé – C. Gioda, N. Martino; Piode – W. Monterin, F. Spanna; Pisgana Occ. – L. Bonardi, G. Stella; Forni, Pizzo Scalino – G. Casartelli, G. Catasta; Rosim, Solda, Zai di D., Zai di M. – U. Ferrari; Rossa (Vedr.), Venezia, La Mare – C. Voltolini; Rutor – R. Garino; Sforzellina – G. Catasta, G. Galluccio, A. Pollini, C. Smiraglia; Toules – A.Fusinaz; Travignolo – M. Cesco Cancian; Tresero – A. Galluccio, G. Pollini; Tza de Tzan – M. Miolli, M. Motta, M. Rosazza; Valtournanche – A. Giorcelli; Venerocolo – P. Battaglia, A. Schiavi; Ventina – M. Butti, G. Casartelli, C. Smiraglia, G. Stella; Vitelli – A. Pollini, F. and G. Righetti.

Kenya (KN)

Ice front variations for the period 1990–1995 as measured by tape are reported for 11 glaciers on Mount Kenya. Addenda from earlier years are given for 12 glaciers in Table BB.

Poland (PL)

There exist about 50 perennial snow patches or glacierets with various dimensions in the Polish Tatra Mountains. These patches were studied by M. Klapa and collaborators. Since 1979, A. Wislinski and coworkers of MPG and UMCS have been involved with systematic observations of glacierets in the region of Morskie Oko (Rybi Potok Valley). Terrestrial photogrammetry has been applied by J. Jania and L. Kolondra (SUP) since 1989 to survey two of these glacierets: Mieguszowiecki and Plat Nad Mokiem Okiem. Length change for Plat Pod Bula and Plat Pod Cubryna are given in Table B.

C.I.S. (SU)

Frontal variation data for 26 ex-USSR glaciers are presented in Table B with Addenda from earlier years for 7 glaciers in Table BB. Information was obtained by means of terrestrial (theodolite and photo-theodolite) measurements or aerial photogrammetry, and for MaliyAktru Glacier by both of them. Eleven glaciers of the presented data selection are also provided with parellel mass balance estimates. Eight glaciers were monitored annually, and 6 more were surveyed with a gap of only one year during the reported period.

Individual investigators and their sponsoring agencies are as follows:

Caucasus (12 glaciers): Djankuat – V.V. Popovnin and Ye.A. Zolotaryov (MGU); Bolshoy Azau, Maliy Azau, Garabashi – Ye.A. Zolotaryov (MGU); Alibekskiy, Tseya, Khakel, No. 462v (Kulak Nizhniy), Bezengi, Mizhirgichiran, Yugo-Vostochniy, Yuzhniy – V.D. Panov (SKGM).

Tien Shan (2 glaciers): Kara-Batkak – A.N. Dikikh (IGNANKir); Tsentralniy Tuyuksuyskiy – K.G. Makarevich (1990–1992), P.A. Cherkasov (1992–1995) (both IGNANKaz).

Pamir-Alai (1 glacier): Abramov – G.M. Kamnyanskiy (SANIGMI).

Dzhungarian Alatau (2 glaciers): Shumskiy, Muravlev – P.A. Cherkasov (IGNANKaz).

Altai (8 glaciers): Leviy Aktru, Maliy Aktru, Korumdu, No. 125 (Vodopadniy), Leviy Karagemskiy, Praviy Karagemskiy, No. 122 (Universitetskiy), Dzhelo – Yu.K. Narozhniy (TGU).

Kamchatka (1 glacier): Kozelskiy – Ya.D. Muravyov (IVRAN).

Pakistan (PK)

Data on 3 glaciers were submitted by W. Kick (†), Regensburg/Germany and by R. Finsterwalder, Institute of Cartography and Reproduction Technology, Technical University of Munich, Germany (cf. Finsterwalder 1989).

China (CN)

Frontal variation data for Urumqihe Glacier is given in Table B. Data on additional 150 glacier were submitted by Liu Shiyin and will be processed for the next volume of "Fluctuations of Glaciers".

The individual investigators are as follows:
Urumqihe S. No. 1 – Chen Yaowu and Jing Xiaoping.Variation data for glaciers in the Urumqihe River basin during 1964 and 1992: Chen Jianming and Liu Chaohai. Their sponsoring agency was the Lanzhou Institute of Glaciology and Geocryology, Chinese Academy of Sciences (LIGG).

Nepal (NP)

Results of observations on 7 glaciers from the Dudh Kosi basin, on Yala Glacier in the Langtang Valley and on Rikha Samba Glacier in the Dhaulagiri Range were reported by Y. Ageta of the Institute for Hydrospheric-Atmospheric Sciences at Nagoya University, Japan (IHAS).

New Zealand (NZ)
Frontal variation data for 82 glaciers in New Zealand are given in Table B. The assessments have been made from oblique aerial photographs taken from light aircraft flights flown at 3000 m. The flights are made for annual end-of-summer surveys of the glacier snowlines (ELA's) on 48 "index glaciers". Many of the index glaciers are included in the data set, the remainder have been photographed on an opportunistic basis during the annual flights.

Antarctica (AN)
Frontal variation data for 8 glaciers in the Dry Valleys area, Victoria Island were submitted by T.J. Chinn, Alpine and Polar Processes Consultancy, New Zealand (APPC). Many of the measurements were made by generous cooperation of other field parties.

CHAPTER 4 MASS BALANCE STUDY RESULTS 1990–1995 AND ADDENDA FROM EARLIER YEARS (TABLES C, CC, AND CCC)

4.1 The Data

Mass balance study results are presented in the following tables: in Table C summary data are given for the years 1990–1995, Table CC contains data from years prior to 1990 which have not been published in a "Fluctuations" volume, or corrected/updated values of previously published data. More detailed data for mass balance versus altitude are given in Table CCC. Data in Tables C and CC were extracted from the completed "Mass Balance Study Results – Summary Data" standardized WGMS data sheets, while the data in Table CCC were sent to the WGMS in various formats as no specific WGMS data form was prepared for this purpose.

A list of the type of data given in each of the Tables C, CC and CCC, together with an explanation of the abbreviations and symbols used can be found on the cover sheet of each table. Balance quantities relating to BW and BS concern the area of the entire glacier; hence, BN in the stratigraphic measurement system (SYS = STR) is the difference between BW and BS. For SYS = FXD (fixed-date system) BA is the annual balance. In cases where SYS is given as OTH (other) or "blank" (unspecified) the situation is admittedly ambiguous. For practical reasons (data format) and in order to avoid rounding-off errors in cumulative balance calculations, balance values are being reported in millimeters. The accuracy of the given data, however is in most cases closer to the centimeter or even decimeter range.

4.2 Sources of Data and Comments for the Various Countries

Canada (CD)

The NHRI mass balance programme in the Rockies and the southern Coast Mountains prevailed through a very uncertain period of government programme review. New personnel and focus were injected into the programme in 1993, including the establishment of university partnerships at each benchmark mass balance glacier. These partnerships, under the Canadian Glacier Variations Monitoring and Assessment Network (NHRI/CGVMAN), have allowed programme continuation in the face of further government budget cuts. NHRI/CGVMAN (M.N. Demuth and D.R. Mackay) and the Universities of Wilfrid Laurier (WLU/CRRC) (G.J. Young) and Toronto (UT/G) (D.S. Munro) conduct work at Peyto Glacier. NHRI/CGVMAN (M.N. Demuth) and Simon Fraser University (SFU/G) (R.D. Moore) conduct work at Place Glacier. CGVMAN hopes to re-establish annual observations at Ram River Glacier and move cautiously towards re-establishing a solid E–W transect through the Cordillera. More recently, RADARSAT C-Band SAR coverage has been obtained at the close of the summer season (concomitant with summer balance field work) over each CGVMAN site/region. The 1991/92 data gap for Peyto Glacier is currently being resolved. The major themes focusing work at each site include climate change detection, glacier hydrology and cold stream eco-hydrology.

Unfortunately, annual observations of mass balance at Sentinel Glacier were discontinued after 1995 because of budget limitations and glaciological/safety considerations. However, terminus variation and index measurements (terminus ablation, annual snowline and temperature) continue. British Columbia Ministry of Parks now operates the huts at Sentinel Glacier. The Sentinel Glacier mass balance record has been adjusted (M.M. Brugman) to reflect recent volume change/hypsometric delineations. The revised data has been summarized but not yet been made available. For Tats Glacier no further information is available.
The programme in the High Arctic continues under the auspices of the Terrain Sciences Division of the Geological Survey of Canada (GSC). Trent University (TU/G) (W.P. Adams, J.G. Cogley, M.A. Ecclestone) continues to conduct and report annual measurements at White and Baby Glaciers on Axel Heiberg Island. An NHRI Science Report detailing a complete reassessment of the White and Baby Glacier mass balance records is now available (refer requests to the WGMS Canadian Correspondent).
TU/G (J.G. Cogley) has established a global glacier mass balance data set for some 230 small glaciers; many of which are not found in the WGMS literature. The series extend from as early as 1887 to the present; most begin after 1957; most are very short, but 46 are longer than 20 years.

NW Devon Ice Cap mass balance data provided by Natural Resources Canada – Geological Survey of Canada (GSC) (R.M. Koerner). GSC work continues on Melville, Meighen and Agassiz. Mass balance measurements extend from 1961 to the present time, with only one year missing in 1969, but measured to give a 2-year value, in 1970. Levelling was done across an outlet glacier in 1963, 1966, and 1971 for volume changes. Levelling was also done at the ice cap edge NW side in 1969 and 1971. NASA overflights were conducted E–W and N–S in 1995. Repeat will give volume (cross section) change (data to be contributed in a future addendum).

Meighen Ice Cap mass balance measurements are made annually and the data set runs from 1959 to present with some years missing, but with the two-year balance for those years measured. NASA overflight in 1995 gives a N–S and E–W surface elevation profile. Repeat of the measurements in future will give a volume change. In addition, levelling over the ice cap in 1987 has been compared to 1960 map by Maps and Surveys to give a cross section change. An automatic weather station was set up on the summit in 1996 to measure snow accumulation, air and ice temperature.

Melville Ice Cap: mass balance measurements from 1964 to present, with some 2–5 year blocks in the 70's when individual annual visits were missed. Surface levelling done in 1987 to be repeated later for volume change.

Agassiz Ice Cap: mass balance NE sector began in 1977 and continued to the present. NASA overflights were conducted in 1995 for repeat at a later date for volume change. The NASA overflights were also over most of the Queen Elizabeth Island ice caps in 1995. Precision GPS, laser altimetry and radar sounding were done. A repeat of these will provide extensive knowledge of the state of balance of most of the Canadian northern ice caps (as far south as the Penny Ice Cap) on Southern Baffin Island.

U.S.A. (US)

Mass balance data for 8 glaciers in the U.S. are given in Table C. Details for South Cascade Glacier are contained in USGS (1993, 1994, 1995, 1996a, 1997) and for Gulkana Glacier in USGS (1997a, 1997b).

The investigators and their sponsoring agencies are: Gulkana, Wolverine – R.S. March and D. Trabant (USGSA); McCall – K. Echelmeyer, B. Rabus (UA); Blue – H. Conway and C. Raymond (UW); South Cascade – R.M. Krimmel (USGST); Silver, Noisy Creek, Sandalee, North Klawatti – J. Riedel (NPSNC). A bibliography of glacier studies by the U.S. Geological Survey is given in USGS (1996a, 1996b).

Ecuador (EC)

Mass balance data for Antizana-15 Glacier is presented in Table C.

Bolivia (RB)

A programme of mass balance measurements is being initiated on the glaciers Zongo and Chacaltaya in a Bolivian/French cooperative project (ORSTOM – COBEE, Francou et al. 1992). Mass balance measurements are also being carried out in the Tres Cruces area by E. Jordan (ISPA).

Iceland (IS)

Mass balance data for 8 glaciers are given in Table C.

Norway (N)

Mass balance results are given for 19 glaciers in Table C. All glaciers on mainland Norway, both mass balance and front position, are measured by Norwegian Water Resources and Energy Administration (NVE), Hydrology Division. Okstindbreen are measured by University of Aarhus, Denmark, in cooperation with NVE.

In Svalbard, all glaciers are measured by the Norwegian Polar Institute (NPI). In addition, J. Jania and coworkers from the University of Silesia (SUP) Poland, provided data for Hansbreen in Hornsund on South-Spitsbergen.

Calving of Hansbreen measured by terrestrial photogrammetry is seen as an important component of the glacier balance. Detailed studies of winter accumulation were carried out at more than 140 points on the glacier surface during the first year of balance observations (1989). Analysis of the snow distributions shows that, in general, accumulation along the central line is representative for the whole width of the glacier. In the following years only 11 stakes along the centerline have been measured for mass balance.

Sweden (S)

Data for 6 Swedish glaciers are given in Table C. The mass balance programme is organized by P. Holmlund (NGSU) and carried out by the Tarfala Research Group (NGSU). The programme is being reorganized to cover two east west transects through the mountain range. The northern one, about 68°N is covered but a southern one (67°N) will be established within the near future, adding two new glaciers to the programme. A pilot study has been run on Partejekna for some years and it will most likely be a permanent programme by spring 1997.

France (F)

Information is given on the mass balance of Sarennes and Saint Sorlin glaciers which are being investigated by F. Valla (CEMAGREF). Data for the southern French Alps are given in Assier (1997).

Switzerland (CH)

Mass balance data for 3 Swiss glaciers are presented in Table C and mass balance versus altitude data for 2 in Table CCC. The investigators and their sponsoring agencies are as follows: Grosser Aletsch – M. Aellen (VAW); Gries, Silvretta – M. Funk (VAW). For the Aletsch Glaciers (PSFG Nos. 5, 6 and 106), whose measurements relate to a whole complex of about 3 dozen glaciers, mass changes are derived from hydrological balances for calendar months and hydrological years, using the equations and model described in earlier volumes. For Gries and Silvretta, the glaciological method is still being applied but on a stake network with the number of stakes reduced from several dozen to ten. New mass balance values are calculated for Gries and Silvretta, and for Gries Glacier a comparison was done between the glaciological and the photogrammetric methods. Three different periods were compared (1961–1979, 1979–1986, 1986–1991), the mean annual mass change differs between -0.06 and +0.06 m/year (water equivalent). These values indicate roughly the accuracy of the average net balance values calculated so far (Funk et al. 1997). A review of mass balance studies on Swiss glaciers is given by Aellen (1995).

Austria (A)

Mass balance data for 8 Austrian glaciers are given in Table C and mass balance versus altitude for 3 of these in Table CCC. Summer balance at Vernagtferner is calculated as the difference between measured winter and annual balances. The investigators and sponsoring agencies are as follows: Jamtalferner, Vermunt- und Ochsentalgletscher, Hintereis- and Kesselwandferner – G. Markl, M. Kuhn of IMGUI, sponsored by Tiroler Landesregierung and Vorarlberger Jllwerke; Vernagtferner – O. Reinwarth (CGBAS); Sonnblick Kees – H. Slupetzky (GIUS). Long-term changes in the Sonnblick region are reported by Böhm (1995).

Italy (I)

Mass balance data for 4 glaciers are given in Table C and mass balance versus altitude data for Caresèr Glacier in Table CCC. The investigator was G. Zanon (DGUP). Data for Sforzellina Glacier (1991–95), for Fontana Bianca Glacier (1992–1995) and for Ciardonay Glacier (1992–1995) are given in Table C; the investigators were C. Smiraglia (CGI) for Sforzellina Glacier, G. Kaser for Fontana Bianca Glacier and E. Armando for Ciardonay Glacier. References: Barsanti et al. 1995; Zanon, 1995.

Spain (E)
The mass balance measurements on the Maladeta Glacier started in 1991 within a project on the quantification of water resources generated by snow and ice melting in Spanish mountains, sponsored by the General Direction of Hydraulic Works of the Ministry of Public Works and Transport (DGOH/MOPT). The group of investigators mainly consists of A.P. Conzáles (DGOH/MOPT), E. Martínez de Pisón (UAM), M. Arenillas Parra (Universidad Politécnica de Madrid), R. Martínez Costa, J. Navarro Caraballo (AMINSA), I. Cantarino Martí (Universidad Politécnica de Valencia).

Kenya (KN)
Monitoring on Lewis Glacier was initiated in 1978 (Hastenrath 1984) and terminated in 1996, thus spanning 18 consecutive budget years: mass balance information was submitted by S. Hastenrath (UWAOS) and is presented in Tables C and CCC. For the budget years 1985/86, 1987/88 and 1989/90, the ELA entries of 5,000 m a.s.l. indicate that the net balance was negative for all 50m elevation bands (Table C). In the budget year 1986/87, only a small part of the glacier remained covered by snow.

C.I.S (SU)
Mass balance data for 13 glaciers are given in Table C and addenda from earlier years for 2 of them are given in Table CC. Nine glaciers of Table C were monitored throughout the entire pentad 1990–95, while for 4 other glaciers observation time series were terminated within the reported period (including 2 glaciers with rather long measurement series: Shumskiy, since 1966/67, and Golubin, since 1957/58).

Values of mass balance components are not published for Kara-Batkak, No. 131 and Suyok Zapadniy, since they were not calculated as winter balance/summer balance as is accepted henceforth.

Mass balance versus altitude data are given for 10 glaciers in Table CCC. It should be noted that this kind of data for Muravlev represents not the entire glacier but only about ⅓ of the area of its snout, i.e., some lowermost altitudinal belts. Mass balance for the entire Muravlev Glacier is not measured.

The individual investigators are as follows:
Djankuat – V.V. Popovnin and D.A. Petrakov (MGU); Garabashi – A.B. Bazhev, O.V. Rototayeva and I.F. Khmelevskoy (IGRAN); Tsentralniy Tuyuksuyskiy – K.G. Makarevich (1990–1992) and P.A. Cherkasov (1992–1995) (both IGNANKaz); Shumskiy, Muravlev – P.A. Cherkasov (IGNANKaz); No. 131, Suyok Zapadniy, Kara-Batkak – A.N. Dikikh (IGNANKir); Golubin – N.Kh. Isayev (KGM) – Maliy Aktru, Leviy Aktru, Praviy Aktru, No. 125 – Yu. K. Narozhniy (TGU); Kozelskiy – Ya.D. Muravyov (IVRAN).

China (CN)
Mass balance data for Urumqihe S. No.1 are given in Table C. The main investigators are Wang Chunzu, Liu Shiyin and Liu Chaohai (LIGG).

Because of intensive melting on the glacier during the 1980s and the early 1990s, Urumqihe S. No.1 has separated into two glaciers, which are traditionally called “the east branch” and “the west branch” of Glacier No.1. For the sake of convenience, mass balance data for both the glacier branches as well as the data for Glacier No.1 (based on the data on the two branches) are provided.

Japan (J)
Mass balance data of Hamaguri Yuki – a perennial snow patch in Japan – was sent by Y. Ageta of the Institute for Hydrospheric-Atmospheric Sciences at Nagoya University (IHAS).

CHAPTER 5 **CHANGES IN AREA, VOLUME AND THICKNESS OF GLACIERS**

5.1 The Data

Data relating to changes in area, volume and thickness of 8 glaciers are given in Table D for periods up to 1990. A list of the type of data tabulated and the units used can be found on the cover sheet of this table. Data for 11 glaciers in Kenya are described in Chapter 8.

5.2 Sources of Data and Comments for the Various Countries

Canada (CD)
WLU/CRRC and NHRI/CGVMAN continue to collaborate at Peyto Glacier and are currently reducing volume, hypsometry and terminus variation data in relation to glacier hydrology and mass balance studies. Long-term volume and hypsometric changes have been reported through two WLU students' theses for the periods 1896–1966 (A. Wallace; volume change only) and 1966–1989 (P. Glenday). WLU is also studying the past century volume change of the Athabasca Glacier. A reassessment of radar ice thickness data for Peyto Glacier (G. Holdsworth and M.N. Demuth) is presently being conducted to provide a reconnaissance order total volume (as at 1984) and volume change estimate for 1966–1984.

The NHRI, Parks Canada and BCH have conducted limited ice thickness measurements at the Athabasca (M.M. Brugman and M.N. Demuth), Saskatchewan (M.M. Brugman) and Illecillewaet (M.M. Brugman) Glaciers. Preliminary data is available but not yet submitted.

U.S.A. (US)
Results from surveying McCall Glacier are given in Table D.

Switzerland (CH)
The data presented for Gries (1979–1986) have been determined by means of a digital terrain model.

Austria (A)
Data on the Hintereisferner was submitted by H. Rentsch and O. Reinwarth (CGBAS).

Kenya (KN)
Data on overall changes in area, volume and thickness were reported by S. Hastenrath (UWAOS) for 11 glaciers with respect to the 1987–1993 period. New maps of the region are included in the present volume and the corresponding text gives further data on changes in area, volume and thickness of Gregory and Lewis Glaciers (see Chapter 8).

C.I.S. (former SU)
Information about 4 glaciers is presented here.

Data for Djankuat (1984–1992) were submitted by V.V. Popovnin and Ye. A. Zolotaryov (MGU). Changes in the spatial position of the glacier were derived by using a digital terrain model of the surface topography based on two maps 1:10,000 made in 1984 and 1992 as a result of the terrestrial photogrammetrical survey.

Data on annual changes in area, volume and thickness for Muravlev (for every year within the period 1981–1991), Shumskiy (for every year within the period 1989–1991) and Tsentralniy Tuyuksuyskiy (for every year within the period 1990–1993) were submitted by P.A. Cherkasov (IGNANKaz), but they represent changes registered only on the snout and not on the entire glacier surface.

CHAPTER 6 SPONSORING AGENCIES AND NATIONAL CORRESPONDENTS FOR THE GLACIER FLUCTUATION STUDIES

6.1 General Remarks

The data in the present volume were supplied by national correspondents of the WGMS and individual glaciological workers. For administrative reasons, the number of correspondents per country must be limited to one. In each country, the national correspondent is responsible for coordinating the collection and submission of data with individual investigators. Individual glaciologists are therefore asked to use this "channel" for submitting their data. Only in extraordinary cases can the WGMS accept data which did not arrive via the national correspondent.

The tabulations in Tables A to F are intended to be useful to the glaciological community. However, these data should not be used uncritically; it would be advisable for users to consult the WGMS about the existence of extra, unpublished, archival material and to consult with individual investigators and sponsoring agencies. In order to facilitate contacts with the various bodies involved, a key to abbreviations used in the text for sponsoring agencies, together with their addresses and those of the national correspondents is given in the following section. In almost all cases it can be assumed that the data are held by the sponsoring agencies.

6.2 Sponsoring Agencies and Sources of Data for the Various Countries

Canada (CD)

• BCH	British Columbia Hydro Hydrology Department 970 Burrard Street CA-Vancouver, BC, V6Z 1Y3
• TU/G	Trent University Geography Department P.O. Box 4800 CA-Peterborough, ON, K9J 7B8
• GSC	Natural Resources Canada Geological Survey of Canada Terrain Sciences Division 601 Booth Street CA-Ottawa, ON, K1A 0E8
• MUN/G	Memorial University of Newfoundland Department of Geography CA-Saint John's, NF, A1B 3X9

• NHRI/CGVMAN	National Hydrology Research Institute Canadian Glacier Variations Monitoring and Assessment Network 11 Innovation Boulevard CA-Saskatoon, SK, S7N 3H5
• RICKER	Karl E. Ricker 868 West 11th Street CA-West Vancouver, BC, V7T 2M2
• WLU/CRRC	Wilfrid Laurier University Cold Regions Research Centre Department of Geography 75 University Avenue West CA-Waterloo, ON, N2L 3C5

U.S.A. (US)

• UAF	Geophysical Institute University of Alaska 903 Koyukuk Drive PO Box 757320 US-Fairbanks, AK 99775 7320
• NPSNC	North Cascades National Park 2105 Highway 20 US-Sedro Woolley, WA 98284
• NPSD	Denali National Park PO Box 9 US-Denali National Park, AK 99755
• USGST	US Geological Survey University of Puget Sound US-Tacoma, WA 98412
• USGSA	US Geological Survey 800 Yukon Drive US-Fairbanks, AK 99775 5170
• UW	Geophysics Program University of Washington, AK 50 US-Seattle, WA 98195

Mexico (MX)

• UNAM	Instituto de Geofísica Universidad Nacional Autónoma de Mexico Circuito Cientifico MX-Coyoacan 04510 D.F.

Ecuador (EC)

• EPN	Escuela Politécnica Nacional Facultad de Ingeniería Civil Dpto. de Hidráulica y Recursos Hídricos Apartado Postal 17 01 2759 EC-Quito

Colombia (CO)

• O.V.S.M.	INGEOMINAS Observatorio Vulcanológico y Sismológico de Manizales Grupo de Glaciología Av. 12 de Octubre No. 15–47 CO-Manizales
• U.CALDAS	Universidad de Caldas Departamento de Geología Calle 65 No. 26–10 CO-Manizales
• IDEAM	Instituto de Hidrología, Meteorología y Estudios Ambientales Subdirección de Geomorfología y Suelos Diagonal 97 No. 17–60, Piso 3 CO-Bogotá

Peru (PE)

• EP	Electroperu S.A. Sim Norte Unidad de Glaciologia Av. Confraternidad Internacional s/n PE-Huaraz, Region Chavin.
• HID	Hidrandina S.A., Av. Confraternidad Internacional s/n PE-Huaraz, Region Chavin

Bolivia (RB)

• ISPAISPA	University of Osnabrück/Vechta Immentun 31 D-2848 Vechta 1

Chile (RC)

• BPRC	see BPRC – U.S.A

Argentina (RA)

• CADIC	Centro Austral de Investigaciones Cientificas Casilla de Correo 92 AR-9410 Ushuaia, Tierra del Fuego
• CIIN	Centro de Investigaciones Interdisciplinarias de Neuquen Rivadiria 153, 6B AR-8300 Neuquen
• IANIGLA	Instituto Argentino de Nivologia y Glaciologia CONICET Casilla de Correo AR-5500 Mendoza
• UHG	see UHG – Germany

Greenland (G)

• GEUS	The Geological Survey of Denmark and Greenland (GEUS) Thoravej 8 DK-2400 Copenhagen NV

Iceland (IS)

• OS	National Energy Authority Hydrological Service Orkustofnun Grensasvegi 9 IS-108 Reykjavik

Norway (N)

• NVE	Norwegian Water Resources and Energy Administration (NVE) Hydrology Division – Glacier section P.O. Box 5091 Majorstua NO-0301 Oslo
• NPI	Norwegian Polar Institute P.O. Box 5091 Majorstua NO-0301 Oslo
• SUP	See Poland

Sweden (S)

• NGSU	Department of Physical Geography Glaciology Section University of Stockholm SE-106 91 Stockholm
• NFR	Swedish Natural Science Research Council Box 7142 SE-103 87 Stockholm
• KVA	The Axel Hamberg Foundation The Royal Swedish Academy of Sciences Box 50005 SE-104 05 Stockholm

Germany (D)

• CGBAS	Commission for Glaciology Bavarian Academy of Sciences Marstallplatz 8 DE-80539 Munich

France (F)

• CEMAGREF	Snow Division – ETNA Ministry of Agriculture Domaine Universitaire, BP 76 FR-38402 Saint Martin d’Hères, Cedex

• CNRS	Laboratory of Glaciology and Environmental Geophysics (L.G.G.E.) Domaine Universitaire, BP 96 FR-38402 Saint Martin d'Hères, Cedex

Switzerland (CH)

• GIETH	Institute of Geography ETH Zurich-Irchel Winterthurerstrasse 190 CH-8057 Zurich
• GIUZ	Department of Geography University of Zurich-Irchel Winterthurerstrasse 190 CH-8057 Zurich
• SAS	Glaciological Comission Swiss Academy of Sciences Bärenplatz 2 CH-3001 Bern
• VAW	Laboratory of Hydraulics, Hydrology and Glaciology ETH Zurich ETH-Zentrum CH-8092 Zurich.

Austria (A)

• CGBAS	See CGBAS – Germany
• GIUS	Geographical Institute University of Salzburg Hellbrunnerstrasse 34 AT-5020 Salzburg
• IHMR	Institute for High Mountain Research University of Innsbruck Innrain 52 AT-6020 Innsbruck
• IMGUI	Institute for Meteorology and Geophysics University of Innsbruck Innrain 52 AT-6020 Innsbruck

• OEAV	Oesterreichischer Alpenverein (Austrian Alpine Club) Wilhelm Greil Strasse 15 AT-6020 Innsbruck

Italy (I)

• CNR	Consiglio Nazionale delle Ricerche Istituto die Ricercha per la Protezione Idrogeologica nel Bacino Padano Strada delle Cacce, 73 IT-10135 Torino
• CGI	Comitato Glaciologico Italiano Via Accademia delle Scienze 5 IT-10123 Torino
• DGUP	Department of Geography University of Padua Via del Santo 26 IT-35100 Padova

Spain (E)

• DGOH/MOPT	General Direction of Hydraulic Works Ministry of Public Works and Transports ES-Madrid
• UAM	Departamento de Geografia Fisica Universidad Autónoma Canto Blanco ES-Madrid
• AMINSA	Agrupación Mediterranea de Ingenierìa c/ Guardia Civil 23, 2, 3 ES-Valencia 46020

Kenya (KN)

• UWAOS	see UWAOS – U.S.A.

Poland (PL)

• SUP	Department of Geomorphology University of Silesia ul. Bedzinska 60 PL-41 200 Sosnowiec
• MPG	Little Geographical Workshop ul. Wschodnia 19/6 PL-20 015 Lublin
• UMCS	Institute of Earth Sciences M. Curie-Sklodowska University ul. Akademicka 19 PL-20 033 Lublin

C.I.S. (SU)

• IGNANKaz	Institute of Geography National Academy of Sciences of Kazakh Republic Pushkin Str., 99 KZ-480100 Alma Ata
• IGNANKir	Institute of Geology National Academy of Sciences of Kirghiz Republic Erkindik Boulevard, 30 KG-720481 Bishkek
• IGRAN	Institute of Geography Russian Academy of Sciences Staromonetny, 29 RU-109017 Moscow
• IVRAN	Institute of Volcanology Russian Academy of Sciences Piyp Boulevard, 9 RU-683006 Petropavlovsk-Kamchatskiy
• KGM	State Agency for Hydrometeorology for the Government of the Krighiz Republic (Kirghizgidromet) Karasuyskaya 1 KG-720017 Bishkek

• MGU	Moscow State University Geographical Faculty Leninskiye Gory RU-119899 Moscow, Russia
• SANIGMI	Central Asian Regional Research Hydrometeorological Institute Observatorskaya, 72 UZ-700052 Tashkent
• SKGM	North Caucasian Regional Hydrometeorology Department (Sevkavgidromet) Yerevanskaya, 1/7 RU-344025 Rostov/Don
• TGU	Tomsk State University Laboratory of Glacioclimatology Lenin Str., 36 RU-634050 Tomsk

China (CN)

• LIGG	Lanzhou Institute of Glaciology and Geocryology Chinese Academy of Sciences CN-Lanzhou

Pakistan (PK)

• WLU	See WLU – Canada

Nepal (NP)

• IHAS	See IHAS – Japan

Japan (J)

• IHAS	Institute for Hydrospheric-Atmospheric Sciences Nagoya University Chikusa-Ku JP-Nagoya 464 01

New Zealand (NZ)

- APPC — Alpine and Polar Processes Consultancy
  c/o Crown Research
  NZ-P.B. 1930, Dunedin

Antarctica (AN)

- APPC — See APPC – New Zealand

6.3 National Correspondents of WGMS for Glacier Fluctuations

In the following list, full addresses are given only if they do not appear in Section 6.2; abbreviations therefore refer to those presented above:

Antarctica (AN): T.J.H. Chinn, IGNS (Dunedin) Ltd., Crown Research, Private Bag 1930, Dunedin, New Zealand

Argentina (RA): L. Espizua, Instituto Argentino de Nivología y Glaciología, Casilla de Correo 330, 5500 Mendoza, Argentina, CONICET (IANIGLA)

Australia (AUS): A. Ruddel, Antarctic CRC and Antarctic Division Glaciology, G.P.O. Box 252 80, Hobart 7001, Australia

Austria (A): M. Kuhn, Institute for Meteorology and Geophysics, University of Innsbruck, Innrain 52, 6020 Innsbruck, Austria (IMG)

Bolivia (RB): B. Francou, Centre de Géomorphologie du CNRS, Mission ORSTOM, Casilla de Correo 9214, La Paz, Bolivia

Canada (CD): M. Demuth, National Hydrology Research Institute, Hydrological Sciences Division 11, Innovation Boulevard, Saskatoon, Saskatchewan S7N 3H5, Canada (NHR)

Chile (RC): G. Casassa, Centro Austral Antártico, Universidad de Magallanes, Casilla 113 D, Puntas Arenas, Chile

China (CN): L. Shiyin, Lanzhou Institute of Glaciology and Cryopedology, Academia Sinica, West Dongyang Road 174, 730000 Lanzhou, China (LIGC).

C.I.S. (SU): D.G. Tsvetkov, Institute of Geography, Russian Academy of Sciences, Staromonetny 29, RU-109017 Moscow, Russia

Colombia (CO): L. Guarnizo, INGEOMINAS, Observatorío Vulcanológico Colombia, Deformation and Glaciology Group, Av. 12 de Octubre No. 15–47, Manizales, Colombia (OVC)

Ecuador (EC): R.H. Galárraga, Escuela Politécnica Nacional, Facultad de Ingeniería Nacional, Departamento de Hydráulica y Recursos Hídricos, P.O. Box 17 01 2759 Quito, Ecuador

France (F): L. Reynaud, Laboratory of Glaciology and Environmental Geophysics, Domaine Universitaire, C.P. 96, 38402 St. Martin d'Hères Cedex, France (LGGE)

Germany (D): L. Braun, Commission for Glaciology, Bavarian Academy of Sciences, Marstallplatz 8, 80539 Munich Germany (CGBAS)

Greenland (G): A. Weidick, Geological Survey of Denmark and Greenland, Thoravej 8, 2400 Copenhagen, Denmark (GEUS)

Iceland (IS): O. Sigurdsson, National Energy Authority, Orkustofnun Grensásvegur 9, 108 Reykjavik Island (OS)

India (IN): K.V. Krishnamurthy, Geological Survey of India, 27, Jawaharlal Nehru Road, Calcutta 700 016, India (GSI)

Indonesia (RI): see Australia (AUS)

Italy (I): G. Zanon, Department of Geography, University of Padua, Via del Santo 26, 351000 Padova, Italy (DGUP)

Japan (J): Y. Ageta, Institute for Hydrospheric-Atmospheric Sciences (IHAS), Nagoya University, Cikusa-Ku,Nagoya 464 01, Japan

Kenya (KN): S.L. Hastenrath, Department of Atmospheric and Oceanic Sciences, University of Wisconsin, 1225 West Dayton Street, Madison, WI 53706, USA (UWDM)

Mexico (MX): H. Delgado-Granados, Instituto de Geofísica, Universidad Nacional Autónoma de Mexico, Circuito Cientifico, Coyoacan 04510 D.F., Mexico

Mongolia (MG): P. Baast, Institute of Water Policy, Surface Water Section, Ministry of Nature and Environment, Baruun Selbe 13, Ulaanbaatar 211238, Mongolia

Nepal (NP): see Japan (J)

New Zealand (NZ): T.J. Chinn, IGNS (Dunedin) Ltd., Crown Research, Private Bag 1930, Dunedin, New Zealand

Norway (N): J.O. Hagen, Department of Physical Geography, University of Oslo, P.O. Box 1042, Blindern, 0316 Oslo, Norway

Pakistan (PK): K. Hewitt, Cold Regions Research Center, Wilfrid Laurier University, 100 University Avenue, Waterloo, Ontario, N2L 3C5

Peru (PE): M. Zamora C., Section of Glaciology and Lake Safety, Electroperú, Jr. Huaylas No. 143, Huarez, Ancash, Peru

Poland (PL): B. Gadek, Department of Geomorphology, University of Silesia, ul. Bedzinska 60, 41 200 Sosnowiec, Poland (SUP)

Spain (E): E. Martinez de Pison, Ingenieria 75, S.A., Velázquez 87, 28006 Madrid, Spain

Sweden (S): P. Holmlund, Department of Physical Geography, Glaciological Section, Stockholm University, 106 91 Stockholm, Sweden (NGSU)

Switzerland (CH): M. Hoelzle, Laboratory of Hydraulics, Hydrology and Glaciology, Federal Institute of Technology, 8092 Zurich, Switzerland (VAW)

United Kingdom (GB): D.N. Collins Alpine Glacier Project, School of Geography, University of Oxford, Oxford OX1 3TB, UK

U.S.A. (US): A.G. Fountain, Department of Geology, Portland State University, P.O. Box 751, Portland, OR 97207 0751, USA

Uzbekistan (SU): G.M. Kamnyanskiy, Main Administration of Hydrometeorology, Cabinet of Ministers, Observatorskaya 72, 700052 Tashkent, Uzbekistan

Venezuela (VZ): R. Quintana, Universidad de los Llanos Ezequiel Zamora (UNELLEZ), Barinas, Edo. Barinas 5201, Venezuela

7.1 Index Measurements

GREENLAND

Hans Tausen Ice Cap (G00015)

A. Weidick, GEUS

The total area of Hans Tausen Ice Cap complex is ca. 4,200 km^2 of which the segment of 2KG01002 (area 95 km^2) was selected for studies of mass and energy balance. Ice surface movement was measured in the same segment in which two local strain nets were established. The work was a part of "Hans Tausen Ice Cap Project – Glacier and Climate change research" under "the Nordic Environmental Research Programme 1993–1997". The field work was initiated in 1994 with establishment of stake net and climatic and radiation stations, and it was continued in the summer of 1995. Other parts of this programme consisted in obtaining of a deep ice core extending from top (1270 m a.s.l.) to bottom (345 m a.s.l.) in the southern dome of the ice cap. Determination of the ice cap complex volume (761 km^3) was achieved via determination of surface and subsurface relief by radar.

References/most important data sources: Reeh 1995, Thomsen et al. 1996.

Unnamed G16 (G00016)

A. Weidick, GEUS/AWI

Ice margin studies were carried out on a small area of the Inland Ice. One study was concerned with improvements of degree-day factors by a reconnaissance glacier and climate study (Braithwaite et al. 1994), another whit a combined investigation on climate, mass balance, ice dynamic and paleoclimatology. The studies were carried out 1993–1994 in a collaboration between AWI and GEUS.

References/most important data sources: Olesen et al. 1995, Braithwaite et al. 1994.

Nioghalvfjerdsfjorden (G00017)

A. Weidick, GEUS

Nioghalvfjerdsfjorden is a ca. 80 km long outlet from the Inland Ice at 79° 20' N, 23° 00' W. Glaciological research was initiated in 1996 on the floating glacier tongue filling the fjord, with the aim of obtaining data to improve the understanding of the Greenland ice sheet response to changing climate, and its effect on future sea level. Mass balance and climate measurements of the surface and mass balance determination of the subsurface of the floating glacier tongue is investigated together with ice dynamic and tidal movement variations. Radar mapping, seismic investigations and hot water drilling through the glacier is part of the programme.

References/most important data sources: Thomsen et al. 1997.

Storstrømmen (G00018)

A. Weidick, GEUS

Glaciological investigations on Storstrømmen were initiated in 1988 and ablation mea surements performed along a stake line in 1989 and 1990, and followed up by visits in 1992 and 1994. Climate stations were operated during the 1989 and 1990 field seasons. The aim of the detailed studies in 1994 was to analyze the microclimate in order to explain the extremely "noisy" ablation-elevation profile of the glacier. Degree-day modelling of the field measurements and the climatological series from Danmarkshavn since 1949 show no trend in the mass balance of 1949–1991. The investigations also showed an abrupt advance over 10 km down the fjord in 1978–1984 displaying all the characteristics associated with a surge. A map sheet of the glacier has been made in collaboration with the 'Universität der Bundeswehr'.

References/most important data sources: Reeh et al. 1994, Bøggild et al. 1994.

Mittivakkat (G00019)

A. Weidick, GEUS

The mass balance has been measured and the glacier margin observed every year since 1988. Since around 1900 the glacier has melted back from a position almost at the sea to the present position 1500 m inland. Mass balance during the last years has generally been positive, especially the year 1990/91 when the ELA was at an elevation of 350 m a.s.l., compared to a normal elevation of 500 m a.s.l. This has resulted in an increase of measured surface velocities and the frontal retreat has stopped. Also sediment transport both with the glacier system and in the pro glacial environment is being studied at the Mittivakkat Glacier (earlier: Mitdluagkat) area. Volume change in 1943/1972/1985 indicates continuous thinning of the ice margin and growth of the accumulation area. Present volume of the glacier has been determined at 193 x 10^6 m^3 (Knudsen & Hasholt, submitted).

References/most important data sources: Hasholt 1986, 1988, Knudsen & Hasholt 1998 (submitted).

Kangerlussuaq transect, West Greenland (none)

W. Greuell, IMAR

Since 1990 measurements of the surface mass balance along a transect on the ice sheet in West Greenland are carried out. Measurements have been performed at 7 locations (8 since 1994) ranging in elevation from 340 to 1850 m a.s.l. Site locations range between 66°59' and 67°6' north, and 46°0' minutes and 50°10' west. If there is any exposition, it is west, but the slope never exceeds 0.25.

Site 4 was displaced in 1993 when the site was moving into a heavily crevassed area. At site 10, mass balance measurements were not carried out before 1994/95. Most of the given values are the mean of 2 or 3 stake values.

Site	Elevation (m a.s.l.)	Distance (km)	Mass Balance (mm w.e.)						
			90/91	91/92	92/93	93/94	94/95	95/96	96/97
4 old	337	2.6	-4.38	-2.25	-3.19				
4 new	383	3.0				-3.58	-4.41	-4.04	-4.40
5	514	5.7	-3.64	-2.03	-3.04	-3.49	-4.00	-2.87	-3.87
relais	735	13.8	-3.20	-1.52	-2.71	-3.08	-3.52	-1.95	-3.30
6	1017	37.0	-2.77	-1.02	-1.54	-1.37	-1.70	-0.93	-2.84
7	1103	51.7	-1.75	-0.30	-1.60	-1.06	-1.78	-0.47	-1.64
8	1282	63.4	-1.47	0.08	-0.14	-0.45	-1.09	-0.03	-0.88
9	1524	91.3	-0.26	0.46	0.23	0.10	-0.05	0.40	-0.02
10	1851	143.5					0.01	0.49	0.27

SWITZERLAND

Gries (Aegina) (CH00003)

Mass balance measurements on Griesgletscher started in 1961. The number of measurement points was 16 in the first eight years; thereafter it was increased up to 78 (13 points/km^2) and kept constant until 1984. Since then, the measurements were continued with a selection of 10 measurement points. Until 1984, the average net balance was determined with the traditional method, where contour lines of equal net balances were drawn by hand to calculate a specific value for each area between the contour lines and then these values were integrated for the entire glacier. For the period 1961–1984, 73% of the 23x78 data set is avaliable. With this important data set, different statistical methods to determine the average net balance were tested to assess their accuracy and to consider a reduction of the number of measurements points.

The mass change for Gries Glacier between 1961 and 1991 is presented in the table below for three different periods determined by photogrammetric and glaciological methods.
In the 3 periods considered, the mean annual mass change varies between -0.06 and

+0.06m/year (water equivalent). These values roughly reflect the degree of accuracy of the average net balance values calculated so far.

Period	mass change [m (water equivalent)]		
	photogrammetric method	glaciological method	difference
1961-79	-0.09 m/year	-0.06 m/year	-0.03 m/year
1979-86	-0.30 m/year	-0.25 m/year	-0.06 m/year
1986-91	-1.02 m/year	-1.08 m/year	+0.06 m/year

References/most important data sources: (Funk et al. 1997)

7.2 Special Events

For the third time, a data sheet was used to compile information on extraordinary events, especially for cases concerning glacier hazards and dramatic changes of glaciers. The name indicated below the glacier refers to the person who compiled the data sheet and who should be able to furnish more information or relevant contacts. If no author's name is given, the compilation of the data sheet was done by staff members of WGMS.

CANADA

Wedgemount (CD02333) glacier flood / mudflow

K. Ricker, RICKER

From the 19th century climax advance until 1990, Wedgemount Glacier gradually receded in the ever-enlarging ice-marginal Wedgemount Lake, with iceberg calving being the dominant process controlling the snout position. In 1991 the snout retreated out of the water onto terrain above lake level. Continued recession since then has produced an outwash fan-delta which is now advancing into the lake basin at a rate of several meters per year. In late August of 1991, several days of heavy rainfall caused erosion and flood damage in the Whistler-Garibaldi region. Discharge from Wedgemount Lake and Glacier into Wedgemount Creek was not measured but likely reached record values to cause destruction of the access trail and bridge crossing several kilometers downstream at a Late Pleistocene terminal moraine, where erosive flooding had not occurred in several hundred years. Unstable steep escarpments required relocation of the trail and construction of a new bridge several hundred meters upstream of the old crossing.

References/most important data source: Ricker (unpublished material).

USA

Data on the quiescent phase of the surge-type Black Rapids Glacier are given by Heinrichs et al. (1996).

Gakona (US00215) glacier surge

K. Echelmeyer, UAF

Gakona Glacier underwent a major surge in 1994. The surge was first observed in July during an overflight. At this time the surge was well underway, with much of the upper reservoir region showing significant (up to 70 m) drawdown. The surface was highly crevassed, with surge-related crevassing extending to the pass with Canwell Glacier to the west (about 1890 m MSL), to the pass with the Chistochina Glacier (177) to the east, and high into each of the accumulation basins on the north side of the glacier (up to 2165 m). No accumulation basins were unaffected, but those to the west and northwest showed the largest drawdown. The lower part of the glacier was extremely broken, with serac fields typical of full surge conditions. On 26 July 1994 the surge front was mapped using GPS in an aircraft (± 60 m). This front was at an elevation of about 1220 m and extended into the terminal (surge) moraine region. The surge front appeared to be an active bulge up to ca. 50 m in height which was progressing into the relatively stagnant ice of the terminal lobe. On 7 September 1994 the glacier was observed again, and the surge front remapped. Very little advance was seen since 26 July, indicating that the surge probably ended in early August. When the surge ended the front was about 4.4 km upvalley of the end of the terminal moraine, and thus was this distance short of the maximum extent of some previous surge. Stream discharge was low and yet extremely turbid in July.

References/most important data sources: Echelmeyer (UAF, unpublished material).

Variegated (US01302) glacier surge

K. Echelmeyer, UAF

Variegated Glacier was observed to be surging in June, 1995. Observations show increased crevassing in September 1994, but the glacier did not appear to be surging at that time. The last surge of this glacier was a two-pulse surge in 1982 and 1983, with the second year's pulse being the strongest and propagating downglacier into the moraines from previous surges. The 1995 surge caused extensive crevassing high up into the upper reaches of the glacier, but the drawdown in the regions was not as large as it was in 1982–83. Crevassing in the middle reaches of the glacier was not as chaotic or severe as it was in 1983. Early June 1995 was a record warm period in the nearby village of Yakutat, and on 11 June there was a large flood of turbid water in the terminal stream of Variegated Glacier. Time lapse camera data shows no significant surge motion for some time after this date, indicating that the surge pulse terminated in June. However, comparison of airborne elevation profiles made on 5 June 1995 and 5 June 1996 show some continued drawdown in the upper reaches of the glacier and a progression of the bulge at the surge front downglacier a short distance. This indicates that there may have been a small second pulse of the surge sometime between summer 1995 and spring 1996. Observations later in 1996 indicate that no significant surge motion occurred during the summer of 1996.
The 12- to 13-year period between the last two surges is shorter than the 16- to 18-year

surge period estimated from the history of all known previous surges.

References/most important data sources: Echelmeyer (UAF, unpublished material).

MEXICO

Ventorillo (MX00101) tectonic impact

H. Delgado, UNAM

A surge started in 1982 in the middle part of the glacier at 5,000 m.a.s.l. and may still be continuing. Volcanic eruption started on December 21, 1994. Not much impact until now (no additional melting or retreat has been documented, pole velocities are remarkably uniform and stable).
Mudflow hazard exists with the current eruptive activity threatening more than 20,000 people downstream.

References/most important data sources: Delgado and Brugman (1995).

COLOMBIA

Lagunillas (CO00008) glacier flood / mud flow

Luis F. Guarnizo, OVC

On January 15th, 1995, at 17:19 local time, a debris flow was generated in the upper part of Lagunillas Valley, on the east flank of Nevado del Ruiz volcano. The flow threatened a 420,000 m^2 area down valley, and buried the bridge between the cities of Manizales (Caldas) and Murillo (Tolima), so that they remained temporaly isolated. There were no reported victims but the phenomenon caused panic among the Lagunilla valley's inhabitants. A seismic signal called tremor, 4 hours and 15 minutes of duration, was produced by the running flow, and it was recorded at six (6) seismic stations managed by INGEOMINAS, at OVC branch, located at Manizales. The debris flow was not preceded by seismic or volcanic activity. The phenomenon was caused by strong melting at the Lagunillas Glacier located on the summit of the Nevado. The meltwater had slowly saturated a deposit left by a landslide in 1994, and on January 15th received important contributions from sliding seracs. All this material ran down the valley to a distance of 6 km. Several small flows occurred during the following days. The last one was recorded on January 20th and buried the bridge over Lagunillas river once again.

References/most important data sources: Ingeominas Internal Report (1995).

ICELAND

Kaladalónsjökull (IS00102) glacier surge

O. Sigurdsson, OS

A new surge started in 1995. The last surge in 1936–1940 resulted in a total advance of 200 m.

References/most important data sources: Adalsteinsson (IGS/NEA, unpublished material).

Leirufjardarjökull (IS00200) glacier surge

O. Sigurdsson, OS

A new surge started in 1995. The last surge in 1936–1940 resulted in a total advance of 1000 m.

References/most important data sources: Jónsson (IGS/NEA, unpublished material).

Múlajökull S (IS0311A) glacier surge

O. Sigurdsson, OS

Surges took place in 1954–1955, 1966, 1971–1972, 1979, 1986 and 1992–1993. Advances are typically between 50 and 400 m.

References/most important data sources: Jónsson (IGS/NEA, unpublished material).

Gígjökull (IS00112) glacier flood / mud flow

O. Sigurdsson, OS

The glacier is calving into a proglacial lake which has shrunk to one-third of its original size since the start of the advance in 1972.

References/most important data sources: Theodórsson (IGS/NEA, unpublished material).

Oldufellsjökull (IS00114) glacier surge

O. Sigurdsson, OS

A surge event in the period 1989–1993 went unnoticed. The advance during the surge was probably 200–300 m.

References/most important data sources: Jóhannesson (IGS/NEA, unpublished material).

Tungnaárjökull (IS02214) glacier surge

O. Sigurdsson, OS

A surge event started at the terminus in the fall of 1994. Maximum speed of advance was 10–15 m/day. The advance stopped in the fall of 1995. The last surge event had been in 1945–1946.

References/most important data sources: Hardarson (IGS/NEA, unpublished material).

Sídujökull W (IS00015) glacier surge

O. Sigurdsson, OS

A surge event started at the terminus in January 1994. Maximum speed of advance was 100 m/day. The advance stopped in the spring of 1994. Earlier surge events had taken place in 1934 and 1963–1964.

References/most important data sources: Indridason (IGS/NEA, unpublished material).

Skeidarárjökull W (IS00116) glacier surge

O. Sigurdsson, OS

A surge event started at the terminus in May 1991. The advance stopped in late fall of 1991. Earlier surge events had been observed in 1985–1986 and 1929. The glacier also very clearly reacts to climate between surges and is therefore designated as “mixed glacier”.

References/most important data sources: Hannesson (IGS/NEA, unpublished material).

Skeidarárjökull E1 (IS0117A) glacier surge

O. Sigurdsson, OS

A surge event started at the terminus in May 1991. The advance stopped in late July of 1991. Earlier surge events had been observed in 1983–1985 and 1929. The glacier also very clearly reacts to climate between surges and is therefore designated as "mixed glacier". A jökullhlaup (outburst flood) started in late September 1991, lake level subsequently subsided and rose again in November 1991. Peak discharge on 21 November 1991 was 2,200 m^3/sec. Total volume amounted to 1.6 km^3.

References/most important data sources: Fiórarinsson (IGS/NEA, unpublished material).

Skeidarárjökull E2 (IS0117B) glacier surge

O. Sigurdsson, OS

A surge event started at the terminus in May 1991. The advance stopped in late July of 1991. Earlier surge events in 1983–1985 and 1929. The glacier also very clearly reacts to climate between surges and is therefore designated as "mixed glacier". A jökullhlaup (outburst flood) started in late September 1991, subsided and rose again in November 1991. Peak discharge on 21 November 1991 was 2,200 m^3/sec. Total volume 1.6 km^3.

References/most important data sources: Fiórarinsson (IGS/NEA, unpublished material).

Skeidarárjökull E3 (IS0117C) glacier flood/mudflow

O. Sigurdsson, OS

An outburst flood (Jökullhlaup) started in late September 1991, subsided and rose again in November 1991. Peak discharge and total volume: see Skeidarárjökull E2 (IS0117B).

References/most important data sources: Fiórarinsson (IGS/NEA, unpublished material).

NORWAY

Baklibreen (N31013) ice avalanche

M. Elvehøy, NVE

Baklibreen is a small outlet glacier from the eastern side of Jostedalsbreen Ice Cap. In August 1986 a regenerated glacier covering approx. 400 m^2 avalanched into the Krundalen Valley killing three people. The regenerated glacier was situated on a ledge with a slope of about 30°, and the avalanche involving a volume of some 100,000 m^3 descended a

vertical distance of 500–600 meters over a horizontal trajectory length of some 800 m giving an overall trajectory slope of some 35°. Observations from eye witnesses seem to indicate that the whole ice mass came down at once.
In 1987, investigations including measurements of mass balance and vertical and horizontal velocities were initiated in order to calculate the change in surface altitude. The emergence velocity decreased from 3.6 m/year at the front to 1.3 m/year 300 m upglacier from the front, while the mass balance increased from -2 m/year to -1.3 m/year in the same region. This means that the ice surface is rising near the front resulting in an advance of the glacier. Ice blocks break off and accumulate on the ledge, and the ice volume in 1992 was about the same as in 1986. This means that the probability of another ice avalanche is increasing from year to year.

References/most important data sources: Laumann (1991).

SWITZERLAND

Gruben (CH00352) glacier flood / mudflow

A. Kääb, GIUZ and D. Vonder Mühll, VAW

Photogrammetrical analyzes and geophysical investigations of the Gruben Glacier, the Gruben rock glacier and associated periglacial lakes allowed for early recognition of an increasing risk related to lake outbursts endangering the village of Saas Balen. The volume of a thermokarst lake (lake 5) on top of the rock glacier had already reached 50,000 m^3 and increased at a rate of 7,500 m^3 per year. A glacier-dammed lake (lake 3) with about 100,000 m^3 volume was assumed to reach the potential of lifting up its ice dam in the coming years, causing a flood or debris flow similar to the catastrophic events which had occurred in 1968 and 1970. Subsequently, an integrative, “soft” protection concept was planned. According to this concept, lake 3 was drained artificially by excavating a ditch along the ice margin and filling part of the lake with debris from the ditch. A proglacial morainic lake (lake 1) in the lower part of the Gruben cirque acts as a natural retention basin for lake-outburst floods caused by the upper periglacial lakes. The artificial dam protecting the outlet of this proglacial lake was recognized to increase stability and had to be reinforced. Observations of the area will be continued.

References/most important data sources: Haeberli et al. (in press); Kääb et al. (1996); Kääb and Haeberli (1996); Vonder Mühll et al. (1996).

Eiger West (CH00353) ice avalanche

M. Funk, VAW

The studies of the hanging glacier concerns the safety of the railway to the Jungfraujoch. Previous investigations had shown that while the railway itself is outside the endangered zone, large ice avalanches exceeding 100,000 m^3 have the potential to threaten tourist facilities located in the immediate vicinity. During a field campaign in 1993, glacier-bed topography/ice thickness was determined by low-frequency radio echo soundings along several profiles across the glacier surface. Thermistors were installed in a number of boreholes drilled to the bed with hot water. Finally, surface velocites were measured by repeatedly surveying the locations of 15 stakes. The results from the field measurements formed the basis for model calculations using the finite element method to determine the flowlines of the glacier as well as the englacial temperature and stress fields. In addition, permafrost conditions underneath the hanging glacier and the possible effects of atmospheric warming on the stability of the investigated hanging glacier were considered in order to develop a monitoring concept. Within the framework of this concept, the evolution at the site is observed with an automatic camera and aerial photographs. If a large ice avalanche appears to be imminent, supplementary velocity measurements at shorter intervals are planned.

References/most important data sources: Haeberli et al. (1997); Lüthi and Funk (1997).

Sirwolte (CH00356) glacier flood / mudflow

During heavy precipitation and simultaneous with the extreme flood event in the nearby town of Brig, the outburst of a moraine-dammed proglacial lake at Sirvolten caused the formation of a 10 to 20 m deep breach. Numerous debris flow pulses in the meltwater stream (Ritzibach) reached the torrent in the main valley of Simplon Pass (Chrummbach), the increased sediment load of which caused considerable damage on the Simplon highway further downvalley.

References/most important data sources: Haeberli (1996).

Bodmer (CH00355) glacier flood / mudflow

Heavy precipitation on 24 September 1994 caused the erosion of a roughly 10 to 20 m deep breach within thick and steeply inclined historical moraines in the forefield of Bodmer glacier (Fletschhorn, Simplon area, Valais). The corresponding debris flow event in the meltwater stream (Lauigrabe) consisted of numerous pulses and destroyed the cantonal bridge and road at the nearby village of Simplon Dorf. The debris entering the torrent in the main valley (Chrummbach) caused further damage in the settlement of Gabi, a few kilometers to the south and on the main Simplon highway. Evacuation of people was necessary at Gabi.

References/most important data sources: Haeberli et al. (in press); Vischer (VAW, unpublished note).

Kaltwasser (CH00007) glacier flood / mudflow

During heavy precipitation and simultaneous with the extreme flood event in the nearby town of Brig, a deep breach was formed in thick and steeply inclined moraines of the forefield of Kaltwasser glacier (Monte Leone, Simplon area, Valais). The corresponding debris flow crossed the main Simplon Highway by passing over the reinforced roof of the avalanche and debris flow gallery.

References/most important data sources: Haeberli (personal communication).

Birch (CH00354) ice avalanche

M. Funk, VAW

In order to recognize in time potential large ice avalanches from steeply inclined parts of the Birch glacier (Bietschhorn, Valais), which potentially endanger infrastructure in the valley of Lötschental, regular velocity measurements using stakes were carried out.

References/most important data sources: internal VAW-reports.

Grosser Aletsch (CH00005) tectonic impact

A. Kääb, GIUZ

The retreat of the tongue of the Great Aletsch glacier since the Little Ice Age caused a local loss in ice thickness of about 200 m until 1995. About 50 m of this glacier surface sinking happened over the period of 1976–1995. The corresponding loss of support for the valley flanks caused a destabilization of the steeply inclined rock wall at the orographic right side of the tongue over an area of about 200,000 m^2.
Photogrammetric investigation of this rock slide showed no significant changes between 1976 and 1986, but horizontal surface velocities of up to 20 cm per year (cm/a) between 1986 and 1995. During the same time period, the upper part of the rock slide sank by about 20 cm/a and the surface of the lower part rose by the same amount. In order to determine this acceleration in sliding velocity with better temporal resolution, geodetic surveys were initiated.

References/most important data sources: Haeberli et al. (1997).

ITALY

Mulinet Nord (I00048) glacier flood / mudflow

G. Mortara, CNR

From 22 to 25 September 1993, sustained precipitation at high intensities occurred in numerous valleys of the Western Alps, especially in the basins of Stura di Lanzo, Orco, Dora Baltea, Sesia and Anza as well as in the Savoy Alps and in some valleys of the Valais

(Switzerland; cf. the events at Sirwolten and Kaltwasser) resulting in widespread damages from floods and debris flows. On 24 September, a deep breach formed in morainic material in front of Ghiacciaio del Mulinet in the Val Grande di Lanzo at an altitude of 2,500 m a.s.l. and triggered a large debris flow affecting the settlement of Forno Alpe Graie and causing considerable damage in the village. The eroded volume estimated at some 800,000 m^3 was mainly deposited at a distance of about 3 km, near the locality of Gias Gabi, over an area of some 400,000 m^2. Near the uppermost point of the morainic incision at 2525 m a.s.l., remains of buried ice could be observed the day after the event. References/most important data source: Mortara et al. (1995); Mercalli and Mortara (1997)

AUSTRIA

Vernagtferner (A00211) glacier flood

L.N. Braun, CGBAS

Due to a continuously increasing extent of ablation area and high melting rates, extremely high runoff values occurred in the Vernagt drainage basin in summer 1994. They resulted in a runoff surplus of more than 50% of the design capacity of the gauging station, in particular during the diurnal runoff peak. These daily floods caused severe damage to the gauging channel and destroyed part of the measurement device. This led to the first prolonged data loss in the otherwise complete time series of discharge at the Pegelstation Vernagtbach since its construction in 1973. A major revision of the channel was successfully completed in October 1995 which should enable the recording of discharge amounts of up to 20 m^3/s.

References/most important data sources: Braun (unpublished material).

NEPAL

Thulagi (NP00013) glacier flood

J. Hanisch, BGR

A glacier lake started forming in the early 1950s by fast ablation of the glacier tongue. The lake is now 2.2 km long with a volume of about $30x10^6$ m^3. The dam is formed by an old buried ice body and not by an end moraine. The outburst potential is, therefore, judged not to be critical.

References/most important data sources: Thulagi Glacier Lake Study (1997 internal report) by DHM and BGR.

NEW ZEALAND

Balfour (NZ882B1) ice avalanche

T.J. Chinn, DSIR

Sometime during December 1995 and January 1996 an ice bulge fell from the summit of Mt. Tasman (3497 m). Its fall was photographed by a climber, P. Dickson.

References/most important data sources: The New Zealand Climber (1996).

Marmaduke Dixon (NZ664C1) tectonic impact

T.J. Chinn, DSIR

On 18 June 1994, a magnitude 6.6 M_L earthquake occurred with the epicenter located within 5 km of this glacier. This, and many other glaciers in the area suffered numerous rockfalls (but no large rock avalanches) from this, the “Arthur’s Pass earthquake”.

References/most important data sources: Chinn (personal communication).

Grey and Maud (NZ711M2) tectonic impact

T.J. Chinn, DSIR

Rock Avalanches occurred on 2 May and 16 September 1992, Mount Fletcher, New Zealand. The southeastern face of Mount Fletcher (2450 m) in New Zealand’s Southern Alps has been a regular source of rockfalls and rock avalanches for many decades. The pace of collapse quickened recently, with the occurrence of many rockfalls since about December 1991 and of two major rock avalanches at 2008 hrs, 2 May 1992, and 1515 hrs, 16 September 1992. The first rock avalanche, inspected on 5 May, removed a 250 m length of ridge immediately to the northeast of Mount Fletcher. A large rock buttress supporting a small glacier on the face also collapsed, indicating failure over the full height of the dome. The volume of this avalanche was 5–10 million m^3. The second avalanche, inspected on 20 September, removed a longer section of ridge line extending to the northeast of the first to leave an ice-cliffed ridge line where it cut through the head of a small glacier. The ridge probably did not fail over the full height of the slope, and a smaller volume, perhaps 5 million m^3, failed. It did, however, remobilize most of the earlier deposit, and thus had the greater deposit volume.
Both avalanches blanketed the Maud Glacier with debris and entered a proglacial lake.

References/most important data sources: McSaveney (1993).

Tasman (NZ711I1) tectonic impact

T.J. Chinn, DSIR

Mount Cook Rock Avalanche occurred on 14 December 1991 in New Zealand. On 14 December 1991, shortly after midnight, a 500 m wide by 700 m high rock buttress failed with no apparent trigger, taking with it the top 10 m of the summit of New Zealand's highest peak, the High Peak of Mount Cook (3,764 m, 12,349 ft; now 3,754 m) in New Zealand's Southern Alps. An estimated 14 x 10^6 m^3 of rock cascaded down the steep east face of the mountain, an initial fall of about 1,500 m. A small part of the avalanche then rose 150 m to overtop an adjacent ridge. The remainder deflected down the local slope to descend a 1,000 m high icefall and cross the Tasman Glacier. The total fall was 2,720 m. At the far side of the Tasman Glacier, the run-up was 70 m. When it came to rest, debris was spread to a distance of 7.5 km from its source (average slope = 20°) over an area of some 7 km^2. The accompanying dust cloud darkened snow to a height of 700 m on the valley above the Tasman Glacier, and an air blast was felt 5 km up-glacier from the outer edge of the debris. Witnesses 3.5 km from the source reported bright orange flashes from rock impacts high on the mountainside. Seismographs, which recorded a clear seismic signal from the avalanche, indicated that it started about 13 December at 11.11 hrs (universal time), reaching a crescendo equivalent to a magnitude 3.9 earthquake within 20 seconds. Maximum energy was emitted for about 70 seconds. If this were the duration of its passage from the summit to across the Tasman Glacier, the avalanche had an average speed of 300 km/hr. A very low amplitude seismic signal continued for at least 5 hours. The witnesses indicated that large rockfalls from the summit area continued for this duration; indeed, "minor" rockfalls from the summit area continued for this duration, and still were occurring two days later when we visited the site.

The course of the Murchison River (flowing, from Murchison Glacier 711J/011) has followed a course distal of the left lateral moraine of the Tasman Glacier. During a storm of January 1994, the river breached the moraine and now permanently enters the proglacial lake of the Tasman glacier. The addition of "warm" water will accelerate recession of the Tasman.

References/most important data sources: McSaveney et al. (1992).

PAKISTAN

Panmah (PK00007) glacier surge

K. Hewitt, WLU

The 15.5 km long Chiring tributary surged between 1994 and 1996. It advanced 2.5 km from its 1993 position and carried a lobe of ice 3.2 km^2 into the main glacier. The Chiring flows north then west from a watershed with Sarpo Laggo and Baltoro Glaciers, has its highest elevation at 6200 m a.s.l. and meets the main glacier at 4260 m a.s.l. The surge transferred 1–1.5 km^3 of ice from the upper to the lower glacier and into the main glacier valley. The “Maedan” tributary, which joins the Chiring near the junction with the main glacier advanced 1.7 km between 1993 and 1996, and may be surging.

References/most important data sources: Hewitt (1997).

Bualtar (PK00004) glacier surge

K. Hewitt, WLU

Rapid advance of terminus between 1989 and 1991 was associated with the second surge in an episode of major disturbance commencing in 1986. Severe crevassing of the lower ice tongue, formation and sudden drainage of ice margin lakes were observed. The terminus advanced approximately 2 km.

References/most important data sources: Gardner and Hewitt (1991).

Aling (PK00035) glacier surge / flood

K. Hewitt, WLU

The surge of the “Lokpar” tributary massively disturbed the main glacier and triggered an advance of the terminus 2 to 3 km. The surge occurred between 1989 and 1993. The Lokpar tributary descends in steep ice falls from the south bank, in a NE direction to join the Aling near its terminus.

In 1992, a glacier lake outburst flood, apparently triggered by the surge destabilizing a large ice-margin lake, destroyed the “Gweh-Aling” summer village.

References/most important data sources: Hewitt (1997).

Sarpo Laggo (PK01002) glacier surge

K. Hewitt, WLU

Some time between 1992 and 1996 the Moni tributary of Sarpo Laggo surged, advancing a lobe of ice about 1.5 km^2 across the main ice stream. The Moni is a right/east bank tributary that drains NE from the Mustagh Tower (7260 m) and the Baltoro Glacier watershed.

References/most important data sources: Hewitt (1997).

Baltoro (PK00006) glacier surge

K. Hewitt, WLU

Between 1992 and 1996, the Liligo tributary surged, advancing 2.5 km to join the main glacier. The Liligo is a left/south bank tributary, which flows NNE to the Baltoro, 10 km above its terminus. Explorers' and mountineers' reports since 1861 seem always to place the Liligo terminus 1–3 km away from the main glacier. No previous surge is recorded. References/most important data sources: Hewitt (personal communication based on LANDSAT imagery).

References/most important data sources: Hewitt (personal communication).

Karambar (PK00028) glacier surge

K. Hewitt, WLU

Beginning in March 1993, a rapid advance of the terminus was observed. The glacier is severely crevassed, ice margin ponds quickly formed and drained. In June 1993, the rate of terminus advance was about 12 m per day. Total advance by summer 1994 was about 3 km, reaching and interfering with Karambar River, but not damming it (as in 1905, surge and glacier lake outburst flood).

References/most important data sources: Hewitt (personal communication).

CHAPTER 8 **THE ANNEXED MAPS**

The following 16 maps can be found in the pocket at the back of the volume. A brief description of the maps with information regarding the purpose of the particular map, its accuracy, and details of the surveying, cartography and reproduction, is added in this chapter. The maps and glaciers concerned are:

1. Thompson Glacier, Canada
2. Nevado del Tolima, Colombia
3. Storstrømmen, Northeast Greenland
4. Amundsenisen, Svalbard
5. Hansbreen, Svalbard
6. Ålfotbreen, Norway
7. Nigardsbreen, Norway
8. Mikkaglaciären, Sweden
9. Stubacher Sonnblickkees, Hohe Riffel & Alpinzentrum Rudolfshütte, Austria (Three maps)
10. Stubacher Sonnblickkees, Snow Line Retreat 1989–1990, Austria
11. Caresèr Glacier 1967–1990, Italy
12. Lewis and Gregory Glaciers, Kenya
13. Glaciers of Mount Kenya 1947, Kenya
14. Glaciers of Mount Kenya 1993, Kenya

THOMPSON GLACIER, CANADA 1:5000

(Aerial Photogrammetric Map)

Institute of Cartography, ETH Zuerich

Thompson Glacier is an advancing outlet of the Fritz-Mueller Ice Cap (former McGill Ice Cap) in Axel Heiberg Island, Canadian Arctic Archipelago. The mean width of the main stream measures about 3 km. The front of the glacier is rimmed in the center and on the east side over a distance of about 2 km by the push moraine and on the west side by an ice-cliff 30 to 50 m high. The valley filling consists, at least on the surface, of permanently frozen fluvioglacial sediments. The snout of the Thompson Glacier is bulldozing the frozen detritus to a push moraine. On the map the push moraine appears as a half-moon shaped bulge, subdivided into ridges running roughly transversely to the glacier.

The definition of a push moraine is given by Chamberlin (1890): “A glacier pushes matter forward mechanically, ridging it at its edge, forming what may be termed push moraine”. A push moraine system consists of three parts: the glacier, the underlying material and the push moraine, the latter being the result of an interaction of the two former elements. The glacier is superimposing a variable stress field on the underlying material. The stresses exceed the strength properties of the material involved. Thus we can understand the push moraine as a failure zone. This phenomenon is certainly not restricted to the observable part; it is bound to extend underneath the glacier (adapted from Kaelin, 1971).

The Thompson Glacier push moraine was surveyed every summer from 1959 onwards. In cooperation with the Canadian National Research Council’s Photogrammetric Research Section a detailed topographical map at the scale 1:5000 was prepared in 1960, and an orthophoto map with contour lines overlayed at the same scale for the 1967 situation. This was the basis laid for the quantitative analysis of the mechanics of the push moraine process by Kaelin (1971) under the supervision of the late Prof. F. Mueller, then at the Institute of Geography, Swiss Federal Institute of Technology (ETH), Zuerich. The present orthophoto map is based on aerial photographs by the Royal Canadian Air Force of August 1977 and was produced by the Institute of Cartography, ETH, Zuerich.

NEVADO DEL TOLIMA, COLOMBIA 1:12,500

(Colour Orthophoto Map)

R. Finsterwalder, Institute of Cartography and Reproduction Technology, Technical University of Munich

Nevado del Tolima is one of the three glacierized mountains of the “Parque Nacional de les Nevados Volcanos” in the Cordillera Central of the Colombian Andes. It is situated at a geographical latitude of 4°40’ North and a geographical longitude of 75°20’ West and reaches up to an altitude of 5221 m a.s.l. Its top rises 270 m above the snowline, which was calculated – according to the 2:1 ratio between accumulation and ablation area in 1987 – to be at an altitude of 4950 m. In 1987 a total area of 1.56 km^2 was covered by glaciers. Included in this sum is a glacier tongue of dead ice (visible between the spot heights 4521 m and 4677 m in the enclosed map).

In contrast to the neighbouring Nevado del Ruiz, which reaches up to 5311 m, Nevado del Tolima did not erupt in historical time. Nevertheless its volcanic activity has not completely ceased. An indication of moderate volcanic activities is given by a conic cavity, about 50 m deep, in the glaciated area near the top of the mountain, from which warm gases are escaping. In the enclosed map this conic cavity is represented by hachures and the indication of the spot height of 5135 m.

The map of Nevado del Tolima was produced in collaboration with the surveys of the glaciers of Nevado del Ruiz after its disastrous eruption in 1985 (Finsterwalder 1992). Images taken during a photo-flight in 1987 were used as the basic material for the map composition. The images were shot from a height of 4000m above ground with a wide angle camera (15 cm/23 cm) using colour films (Linder 1993). For mapping the glaciers of Nevado del Tolima one stereo model, covering 4.9 km x 3.6 km of ground, was chosen. The stereo model was orientated by the same control points that were used for the surveys of Nevado del Ruiz (Linder 1993). The measurements of the contour lines were carried out in a line by line order. In this way it was possible to generate contour lines which corresponded to the features in an orthophoto. Spot heights were measured mainly at the fronts of the glacier tongues. The area covered by clouds during the photo flight in 1985 could be mapped using photos taken in 1959. The orthophoto was generated in an analogue process, using an orthoprojector ORF1 of WILD (Eglseder 1993). The further cartographic process included colour separation, reproduction of the contour lines and the map printing itself. The colour slicing for cyan, magenta and yellow was effectuated using a scanner with a screen-distance of 60 dots per centimeter. The contour lines of the glaciated area were reproduced by cribbing and were then combined with the cyan-plate. A separate black-plate contains the contour lines for non glaciated areas, the spot heights, the lettering and the frame work. Map printing was carried out by combining the four colours black, cyan, magenta and yellow.

It is mentioned here that the orthophoto map “Nevado del Tolima 1:12,500” was used as a basis for the conventional topographic map “Nevado del Tolima 1:2500”. In addition to this map a stereo model was produced, which allows the stereoscopic view and interpretation of the map (Finsterwalder 1996).

STORSTRØMMEN, NORTHEAST GREENLAND 1:150,000

(Aerial Photogrammetric Map)

H. Oerter, Alfred-Wegener Institute for Polar and Marine Research, Bremerhaven

N. Reeh, Danish Polar Centre/The Geological Survey of Greenland, Copenhagen

K. Brunner, University of the German Army, Institute for Photogrammetry and Cartography, Munich

The map shows the glacier complex of Storstrømmen, Kofoed and Hansen Glacier in northeast Greenland. Most of the ablation area of this important glacier complex is covered by the two map sheets. The map was published by the Alfred-Wegener Institute for Polar and Marine Research in co-operation with the Geological Survey of Greenland (GGU, now incorporated in the Geological Survey of Denmark and Greenland GEUS), the Danish Polar Centre, and the University of the German Army, Munich, Germany. The printing was done at the Technical College of Karlsruhe, Germany. The topography is based on aerial photographs from 1978, ground control and aerial triangulation by Kort- og Matrikelstyrelsen, Denmark and was analyzed photogrammetically by H.F. Jepsen & J.P. Neve at GGU. N. Reeh added glaciological features to the map, e.g., describing boundaries of debris-covered ice, surface meltwater channels, and Holocene moraines. The stake net used for mass balance studies and ice flow measurements is also shown (Bøggild et al. 1994). K. Brunner and G. Fiutak, Munich, did the cartographic work by means of digital cartography.

Storstrømmen is one of the major outlet glaciers in northeast Greenland, with a drainage basin of 32,100 km^2 in total. For the years 1994 and 1995 mass balance studies yield the following results (Jung-Rothenhäusler, in press):

	1994	1995
ELA [m a.s.l.]	1280	1350
ablation area [km^2]	6155	6723
net ablation [mm WE/a]	510	810
mass balance [mm WE/a]	7	-83

Recent velocity fluctuations of Storstrømmen indicate surge-type behaviour (Reeh et al. 1994), further evidence is presented by Weidick et al. (1996), who describes changes in the glacier extent during the Holocene. For the Storstrømmen Glacier front, called Bredebrae, three positions are shown in the map: the 1978 ice front, the year of the aerial survey, the 1912/13 ice front as described by Koch and Wegener (1930, 1911), and the 1984 ice front as seen by LANDSAT MSS image, the foremost position documented in recent time. The period 1978–1980 was the most active phase of the glacier with ice velocities at the front of up to 4035 m/a (Jung-Rothenhäusler, in press). Obviously, the advance had come to an end in 1984 and since then a retreat of the ice front can be observed. The total increase of the glacier area between 1978 and 1984 was 118.6 km^2. Storstrømmen may presently be described as being in the recovery phase, which began 1988 and is ongoing.

AMUNDSENISEN, SVALBARD 1:25,000

(Aerial photogrammetric map)

J. Jania, I. Kolondra, B. Gadek, Department of Geomorphology, University of Silesia, Sosnowiec, Poland

The Amundsenisen Icefield is located in the central part of south Spitsbergen on Wedel Jarlsberg Land. This is a wide accumulation area for the largest glaciers in this region, namely the Torellbreen, the Paierlbreen and the Recherchebreen. Its area is approximately 40 km^2. A high mountain range separates the area from the glaciers which flow northeastwards. The area is influenced by oceanic air masses from the south-western direction. The surface of Amundsenisen is slightly undulating and lies at an altitude of 650–750 m a.s.l.

Elevation changes of the central part of Amundsenisen were measured using a map derived from the terrestrial photogrammetric survey carried out in the summer of 1934 and a similar photogrammetric survey at the same points in April 1990. The results indicate a decrease in the glacier's thickness of about 10–12 m. Accumulation on the Amundsenisen area is one of the highest in Spitsbergen. Mean winter mass balance in the period 1990–1995 was +1.43 m w.e. Compared with the mean net balance of +0.56 m w.e., the lowering of the accumulation area surface by 0.2 m per year indicates that a predominant amount of the ice mass discharge was drained into the outlet glaciers.

The Paierlbreen, the Torellbreen and the Recherchebreen have been described as surge type glaciers. Distinct changes of the Paierlbreen surface topography were observed in April 1994. New fields of wide crevasses, shear zones along the contact zone of the glacier and the valley slopes and high undulations of the glacier surface occurred. These features point to the development of the active phase of a new surge.

The map of the Amundsenisen was published on the 60th anniversary of Polish geodetic works on Spitsbergen. It covers part of the aerial photographs which belong to the Norwegian Polar Research Institute and were taken on 29 July 1990 (No. 3408–3411; flight altitude 7600 m; camera focal length 152.83 mm). The slides are at the scale 1:50,000. The photogrammetric control and cartographic elaboration is the same as used for a "twin" map of Hans glacier. The map contains: topographic elements, posts of the terrestrial photogrammetric survey of 1934 (9, 10, 16, 17, 20, 21) and 1990 (901–906), glacier mass balance stakes placed in 1991 (GPS reading). The contour interval is 40 m. The elaboration of relief of the glacier and the snowfields was difficult due to an unsatisfactory optical density of the slide copies. Small gaps along the western border of the map are the result of the different sizes of the stereomodel blocks. Names of the geographical locations are taken from the topographic map of Svalbard 1:100,000. ("Torellbreen" and "Van Keulenfjorden" sheets). Erratum: the name of the summit at 881 m a.s.l. (coordinates 85721000/518200) should read "Belvedertoppen", not "Belvedorotoppen". The map was published in two colours using raster techniques in 1994).

HANS GLACIER, SVALBARD 1:25,000

(Aerial photogrammetric map)

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The Hans Glacier is a grounded tidewater glacier which lies at the northern shores of Hornsund, South Spitsbergen, in the vicinity of the Polish Polar Station. The glacier extends from sea level to approximately 600 m a.s.l. and covers an area of about 57 km^2. Its length is about 16 km, the mean slope angle 1.5°. The glacier tongue is about 2.5 km wide and terminates as a 1.5 km long ice cliff. The lateral parts of the front are based on land. The glacier thickness increases gradually from the lower part of the ablation area zone (150–200 m) towards the middle part of the glacier, where it is about 300 m. The maximum ice thickness exceeds 400 m.

The mass balance of the Hans Glacier has been measured since the winter season of 1988/1989. The average net balance of the Hans Glacier is -0.52 m w.e. (including mass losses due to calving). Mean winter balance of the glacier surface is +0.9 m w.e. and mean summer balance -1.14 m w.e.

The dynamics of the lower part of the glacier has been monitored systematically by means of terrestrial photogrammetry since 1982. The glacier surface velocity in the profile located ca. 0.5 km from the ice cliff is about 60 ma^{-1} (averaged for the profile). In the upper part of the ablation zone, the velocity is about 30 ma^{-1} at the center-line. The average velocity near the calving front exceeds 210 ma^{-1}. The mean annual calving speed is about 250 ma^{-1} and annual calving flux amounts to 22 x 10^6 m^3. The mean annual retreat of the terminus, averaged over the whole ice cliff, is about 40 m. Glacier fluctuation and later mass balance data were repeated in the previous edition “Fluctuations of Glaciers” and “Glacier Mass Balance Bulletin”. The glacier surface has decreased by about 2 km^2 due to cliff recession in the period 1936–1990, and farther 2.5 km^2 until 1994. The volume loss due to this recession is 0.13 km^2. The major decrease of the glacier volume by 1.2 km^3 has resulted from a general lowering of the glacier surface. The mean decrease rate of the ice thickness averaged over the whole glacier is 0.44 m of ice per year. This indicates a prevailing negative mass balance in the observation period of 54 years.

The results of ice temperature measurements in shallow and deep (to bedrock) boreholes (1979–1997) and radio-echo soundings (July 1979, April 1997) on the Hans glacier show a subpolar polythermal structure. The glacier accumulation zone consists – with the exception of the uppermost layers which show seasonal temperature fluctuations – within the entire vertical profile of ice at the pressure melting point. However, a cold ice layer is found in the upper strata of the ablation zone. This ice layer varies in thickness and may even be absent in the western lateral part.

The upper layer of cold ice gets thinner along the glacier center-line from the equilibrium line altitude down to the glacier front.

The map of Hans Glacier was prepared from infrared false colour aerial photographs which belong to the Norwegian Polar Research Institute and were taken on the 12th August of 1990. The slides were taken by a Wild aerial camera of the RCZO-type (UAGA-F No. 13138; camera focal length 152.83 mm) at a scale of 1:50,000. Three stereomodels (4058–4055) were applied to compile the map sheet.

The geodetic net was drawn up using the block aerotriangulation method which consisted of 8 models (the block was elongated northwards so that it could be used for the photogrammetric control of Amundsenisen). Identified topographic details of known coordinates were used as matching points. The coordinates of all the points were converted from the Gauss-Krueger system into the UTM system (zone 33X – central meridian 15°E). To adjust the aerotriangulation, 16 points of xyz coordinates, 2 points of xy coordinates and 14 points of z coordinates were used. The following accuracy of aerotriangulation was obtained:

– inner accuracy of the block: mx = 3.1 m, my = 2.95 m, mz = 1.66 m
– accuracy of the control adjustment: mx = 5.65 m, my = 5.84 m, mz = 2.17 m, mp = 8.13 m.

The map content was elaborated using analogue methods and a 13-Zeiss-Jena topocart at the scale 1:20,000. The following contour intervals were applied: 10 m for the area not covered by snow and ice, 5 m for the glaciers and snowfields. The following details are marked on the map: ice cliffs, glacier crevasses, glacier moulins, streams and lakes, glacier and snow limits, debris-covered ice, moraines, additional altitude posts. The map also contains the location of marked permanent posts for terrestrial photogrammetric surveys (8–44, 106–107, 201–202, 601–602, 608–609), meteorological stations, environmental and meteorological monitoring stations, hydrometric gauging stations, glacier mass balance stakes, glacier temperature measurement points, the Polish Polar Station. For better demonstration of the relief of the glacier's surroundings a method of "no generalization" of contour lines was used. It means that every contour line on land (and ice) was plotted, even those on very steep slopes. They are so dense in some areas that an effect occurrs which allows the simulation of a shadowing technique representing mountain relief.

The autogrammetric fair copy was transformed into slides using the engrave method. The slides were then reduced to a scale of 1:25,000. The geographical names were applied according to the names on topographical maps of the sheets "Torellbreen" and "Van Keulenfjorden" (scale 1:100,000). The map includes some new geographical names (in brackets) proposed by the 1957–1992 Polish expeditions and regularly used in field works.

The map was produced in two colours using raster techniques. The map has got two editions, the first one in 1993 and the re-edition in 1997 especially reprinted for the 7th Volume of the "Fluctuations of Glaciers".

The production of this map was supported by the Polish Committee on Scientific Research under the terms of research grant No. 6 6257 91 02 (for J. Jania) and by the UQAM, Canada under the terms of a special grant (for J. Schroeder). The assistance of the Norwegian Polar Research Institute (particularly that of J.O. Hagen, B. Lytskjold and T. Eiken) is greatly appreciated. Re-edition of the map was supported by the University of Silesia internal grant.

ÅLFOTBREEN, NORWAY 1:10,000

(Aerial Photogrammetric Map)

Norwegian Water Resources and Energy Administration (NVE)

The Glaciology Section within the Norwegian Water Resources and Energy Administration (NVE) started mass balance studies on a series of glaciers in the early 1960s. The glaciers were selected along an east-west profile from the most continental glacier Gråsubreen in the Jotunheimen area, south-central Norway, to the most maritime glacier Ålfotbreen near the Atlantic coast. Some of the selected glaciers provide meltwater to hydro-electric power stations in this part of Norway.

For use in the field work, detailed glacier maps were produced. The first one showing Ålfotbreen was published in 1969, based upon aerial photographs taken in August 1968. That map has been used for plotting field data etc., every year since.
In 1988 the availability of an excellent air photography made it possible to produce a new glacier map of Ålfotbreen. This map is printed in four colours, and a great deal of glaciological information is given on the back of the map.

NIGARDSBREEN, NORWAY 1:20,000

(Aerial Photogrammetric Map)

Norwegian Water Resources and Energy Administration (NVE)

The famous Nigardsbreen Glacier is a 48 km^2 outlet from the largest ice cap in Norway, Jostedalsbreen (487 km^2). It drains from the highest point of the ice cap (1952 m a.s.l.) down to the Nigardsvatn in the Jostedalen valley. The glacier tongue is presently at about 350 m a.s.l. but has recently started to advance down the valley.

During the “Little Ice Age” the glacier had a larger extent than today, but since the advance around 1750, when it completely destroyed a farm, it has been receding almost continuously. Only small re-advances, forming minor end moraines, occurred in the 19th century.

Since then the glacier has attracted numerous tourists, artists, photographers, and scientists, so information about the ice retreat is abundant.

In recent decades the tongue and the entire glacier have been surveyed and mapped several times. The first known photograph of the terminus was taken in 1864 and was published in the newspaper “Illustreret Nyhedsblad”; the first known vertical air photograph dates from 1937 (shown on the reverse of the map). The valley and the lower part of the glacier was painted in 1848 by the Norwegian artist J.C. Dahl (reproduced in black and white on the reverse of the map, where a photo showing the moraines etc., in 1937 is printed also).

Detailed glacier maps of the entire glacier at the scale of 1:20,000 with 10 m contours were produced from vertical air photos taken in 1966, 1974, and 1984.

Similar maps of the lower parts of the glacier were produced from terrestrial photogrammetry in 1937 and 1951. Based on these various maps it is possible to determine variations in ice thickness since 1937 for areas below 1200 m a.s.l.

It was decided to collect various information about Nigardsbreen and print it on the reverse of the latest glacier map (based upon the 1984 photography). A summary of the sediment transport studies, a list of survey points with their coordinates as well as a list of relevant literature on Nigardsbreen are also given.

MIKKAGLACIÄREN, SWEDEN 1:20,000

(Aerial Photogrammetric Map)

P. Holmlund, University of Stockholm, Sweden

This map is based on aerial photographs taken by the Swedish Authorities for Land Survey (LMV) on September 4, 1990. The map scale is 1:20,000 and the map is printed in three colours. Snow coverage and crevasses are mapped from the stereo model. The geodetic base is taken from the official Swedish topographic map at the scale 1:100,000 (28H Sarek). This geodetic base has not been upgraded for many years and includes summit elevations that are barometrically determined. The stereo model used did not cover the north-western corner of the map, which had to be transferred from a construction based on aerial photographs taken in August 1980. Thus, anyone intending to use the map scientifically is recommended to contact the Glaciology Division at the Department of Physical Geography at Stockholm University.

The first maps of Mikkaglaciären were published in 1901 and 1910 by Axel Hamberg. The first one is a detailed map of the frontal area at a scale of 1:10,000, the second is a more general map of the entire massif at the scale of 1:50,000. In 1970 Torsten Stenborg published a map at the scale of 1:10,000 based on aerial photographs taken in 1960. The map was printed in two colours. In 1986 Per Holmlund published a black and white map at the scale of 1:30,000 based on aerial photographs taken in 1980. The 1980 map was constructed at the scale of 1:10,000 using the same geodetic base that has been used for the 1960 map.

STUBACHER SONNBLICKKEES, HOHE RIFFEL & ALPINZENTRUM RUDOFLSHÜTTE, AUSTRIA 1:5000

(Three Image Line Maps)

J. Aschenbrenner and H. Slupetzky, Department of Geography, University of Salzburg

The Stubacher Sonnblick Glacier in the Hohe Tauern Range of the Austrian Alps was mapped in 1991 by J.Aschenbrenner under the glaciological supervision of H. Slupetzky. The main goal was to combine a conventional orthophoto-map with a conventional line map including all of the characteristics of a topographic map. The enclosed map of the Stubacher Sonnblick Glacier represents the preliminary version ("first generation") of a new type of map (Aschenbrenner 1992).

The maps are based on aerial photographs specially flown on August 29, 1990 by the Austrian Army Remote Sensing Section. The orthophoto projection and geodetic modelling were carried out at the Institute of Photogrammetry and Remote Sensing at the Technical University of Vienna.

The main cartographic elements are depicted using the following colours:

black:	map-frame with coordinates (Austrian Gauss-Krüger System), survey-points, rock edges, names
grey:	orthophoto
sepia:	contour lines in bedrock with altitudes (modulated by the continuous tone photograph), debris (especially morainic ridges)
green:	vegetation
blue-green:	glacier lakes
ice-blue:	glacier orthophoto
cyan:	hydrography, contour lines on glaciers with altitudes (modulated by the continuous tone photograph), glacier routes
red:	trails with the numbering system of the Austrian Alpine Club

Considering some necessary improvements after the development of the innovative prototype map ("first generation") of Stubacher Sonnblick Glacier two further generations of image line maps were established. First, the number of printing colours was reduced to seven by saving the blue-green for glacier lakes. The printing of the "third generation" revealed that it should be possible to reduce the number of printing colours to a total of six by using only one blue tone for all glaciological and hydrographic features.

Based on the experience gained during the development of the prototype map ("second generation"), technological changes were made. The black plate was lightened up in order to reduce the darkness in the shadow. Three features were additionally depicted by a free-hand line drawing. They were: crevasses, rock and debris. The modulation of contour lines did only work sufficiently on the glacier areas, therefore it was not further used on terrain.

In the “third generation” (sheet Granatspitze, not enclosed) the black plate was reduced to the areas of rock by providing enhancement of the rock drawing. The reproduction of the orthophoto was completely done by digital picture processing. This improved third version of the Granatspitze map was printed in 1993 (Aschenbrenner and Slupetzky 1995). There are still some possibilities for improvements, especially concerning the quality and detail losses between the original air-photo and the processed orthophoto.

In terms of glaciological purposes, the new maps provide a necessary tool for the calculation of the mass balance of the Stubacher Sonnblick Glacier. Furthermore, they are the new basis for further glaciological calculations. The total area of the Stubacher Sonnblick Glacier was 1.772 km^2 in 1969 compared to 1.504 km^2 in 1990. The calculations on two other glaciers, the Ödenwinkel Glacier and Riffel Glacier revealed a similar picture. The area was reduced from 2.22 to 2.06 km^2, respectively 1.496 to 1.404 km^2. In summary, five sheets of that type of maps were printed (Aschenbrenner and Slupetzky 1994). The total area of 18 glaciers shown on the entire maps was 6.663 km^2 in 1990 compared to 7.585 km^2 in 1969. This means a 0.924 km^2 (or 12%) loss between 1969 and 1990.

STUBACHER SONNBLICKKEES, AUSTRIA 1:10,000

(Snow Line Retreat during the Mass Budget Year 1989/90)

J. Aschenbrenner and H. Slupetzky, Institute of Geography, University of Salzburg

The map sheet shows five stages of snow line retreat during the summer of 1990 using an image line map (scale 1:5000) as a topographic background. The snowline retreat was surveyed using terrestrial photographs. The limits of the snowline retreat are the result of monoplotting interpretation by the Institute of Photogrammetry and Remote Sensing at the Technical University of Vienna (Aschenbrenner 1994).

The maps are printed using four colours:

black:	map frame with coordinates (Austrian Gauss-Krüger System), survey points, rock edges, names, contour lines on terrain with altitudes (modulated by the continuous tone photograph), alpine tracks
grey:	orthophoto; glacier edge; transient snowline
ice-green:	glacier orthophoto (on areas of ice only)
blue:	areas of firn and old snow, contour lines on the glacier with altitudes

The stages of the snow line retreat on the glacier are visualized in blue and green colours to emphasize this special topic. The surrounding area of the Stubacher Sonnblickkees is depicted in black and white. The orthophoto itself is used for the representation of ice, while firn and old snow are depicted in screened areas.
The glaciological research programme on Stubacher Sonnblickkees started in 1963 and focuses on the mass balance survey of the glacier. Due to the distinct topography, the pattern of ice and snow is complicated. This necessitated a careful mapping of the snow line retreat (Slupetzky et al. 1969). The transient snowline (equilibrium line) is not a regular line by far. Until recently, the lines were mapped on the basis of photogrammetrical surveys (Sluptezky et al. 1971). Often amateur photographs only were available for mapping of the yearly maximum snowline. The position of the snowline was then drawn directly onto the map, thus it was often close to the present situation (Slupetzky 1971). These first attempts were carried out to derive the necessary information by means of monoplotting instead of using the classic photogrammetric techniques. The results have proven to be quite accurate (Aschenbrenner 1994).

CARESER GLACIER, 1967–1990, ITALY, 1:10,000

(Thematic Map)

M. Giada and G. Zanon, Department of Geography, University of Padova, Italy

An aerial survey carried out in October 1990 on the Caresèr Glacier allowed comparisons with a previous survey of 1967. Further determinations of the area, elevation and volume variations during the period 1966–1967 and 1989–1990 could be made. These measurements coincide with 24 years of direct glaciological measurements to evaluate annual mass balance.

The survey methods used were similar to those already adopted for the 1967–1980 comparisons and improved for 1980–1985 (Giada and Zanon 1985; 1991). Aerial photogrammetry was used to produce digital models of the glacier surface, referring to a local system of coordinates. The survey model for 1967 was obtained by analytical photogrammetry, the one for 1990 done directly by stereo-restitution. In both cases, two sets of data were produced, arranged in matrices of elevation values having the same frame of reference and the same grid size (50 m). Thus the two digital models coincide. Comparisons between the two matrices (algebraic sums of coincident grid values) gave a third matrix containing the global elevation differences in the period 1967–1990. The elevation difference matrix was directly used to produce the thematic map using CAD tools. The process itself consisted of the automatic evaluation of different contour values and the subsequent hatching of the areas between two consecutive contour lines.

Comparisons of data from the two aerial surveys produced the thematic map 1:5000, with isolines expressing elevation variations of the glacier surface according to the classes shown in the legend. The map also shows variations in glacierized area for the same period.

Glaciological analysis:

The lowest altimetric zone (2840–2900 m) clearly shows the great increase in area (73.45% of the initial 1967 value) due to the reduction in thickness of this part of the glacier, falling entirely within the 30 m class of negative variation on the map. The greatest reductions occur in the zone between 3150 and 3350 m, which represents 93.13% of the 1967 area. The overall reduction between 1967 and 1990 is 18.30% of the pre-existing surface area.

The 1967–1990 elevation variations were all negative and range between -27.19 m (2840–2900 m zone) and -6.46 m (3200–3350 m zone). The mean variation for the entire surface is -13.76 m. Therefore, in the zone between 3000 and 3150 m, 68% of the overall volume loss occurred. This value corresponds to the 1980–1990 loss, which was 67% (Giada and Zanon 1991). Table 1 shows these variations and the corresponding volumes, according to the 1967 area.

Data obtained from the 1967 and 1990 aerial surveys were compared with the results of direct glaciological measurements for 1966–1967/1989–1990 balance years (Giada and Zanon 1995). Altitude and volume values were converted into water equivalents (WE), with reference to the 1967 area. For the sake of homogeneity, the calculation of net balance volumes refer to the 1967 area, without considering the area changes which occurred between 1967 and 1990. Instead, these variations were considered in the mass balance computations (Zanon 1992). Comparisons between the two sets of data may be considered satisfactory: the overall difference, expressed as water depth, is only -0.34 m or -2.7%. However, there are considerable differences in the data for single altimetric zones, in particular in the range 3200–3350 m. In this zone, due to its topographical and morphological configuration, comparisons must be viewed as purely indicative.

Of particular interest are the variations in the 3050–3100 m zone, where mean and medium elevation, and ELA with zero balance are found. Thus the variations in this zone must be considered critical for the glacier. The variation in 1990 was -13.20 m WE, with a volume loss of 14.1110 x 10^6 m^3 WE, or 24% of the 8.53 m and -11.1230 x 10^6 m^3 WE, or 19% of the total. The losses observed in the next zone at 3100–3150 m (-8.53 m and 11.1230 x 10^6 m^3 WE, or 19% of the total) and the already mentioned reduction in surface area, clearly indicate the considerable state of disequilibrium which arose in the glacier at the beginning of the 1990s. This originates almost exclusively in the period of accelerated negative variations which took place between 1980 and 1990 on the southern slope of the Central Alps (for other details, see Giada and Zanon 1995).

LEWIS AND GREGORY GLACIERS, KENYA, 1:2500

(Aerial Photogrammetric Map)

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The construction and evaluation of this map is fully documented in Hastenrath et al. (1995), while a brief summary must suffice here.
Surveys were flown by Photomap (K) Ldt. on 1 March 1990 at 22,000 feet, and on 9 September 1993 at about 20,500 feet. Stereoplotting was performed at the University of Nairobi by the same photogrammetrist, on the Wild A-8 Stereo Autograph. The 1993 map was compiled from two frames. Seven well-surveyed ground control points were available, as for mappings in earlier years (Hastenrath and Rostom 1990).

The changes in the Lewis and Gregory Glaciers during 1990–93 are summarized in the following tables:
(A = area, h = average thickness, V = volume, L = length, E = terminus elevation in 1990 and 1993, Δ = changes over the 1990–1993 interval)

Altitude m a.s.l.	Area km^2	Elevation m	Volume 10^6 m^3	%
2840-2900	0.0565	-27.19	-1.54	2.36
2900-2950	0.2115	-25.73	-5.44	8.38
2950-3000	0.3525	-20.91	-7.37	11.35
3000-3050	0.9030	-17.91	-16.19	24.92
3050-3100	1.0690	-14.67	-15.68	24.14
3100-3150	1.3040	-9.48	-12.36	19.03
3150-3200	0.4580	-8.75	-4.01	6.17
3200-3250	0.3660	-6.46	-2.36	3.64
2840-3350	4.7205	-13.76	-64.96	100.00

	Lewis			Gregory		
	1990	1993	Δ	1990	1993	Δ
A [10^3 m]	230.0	205.0	25.0	63	40	23.0
h [m]	13.7	10.3	4.6	-	-	0.9
V [10^3 m^3]	3170.0	2393.0	1064.0	-	-	57.0
L [m]	940.0	915.0	25.0	-	-	30.0
E [m]	4620.0	4620.0		4708	4720	

GLACIERS OF MOUNT KENYA 1993, KENYA, 1:5000

(Aerial Photogrammetric Map)

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Full documentation on this map is contained in Rostom and Hastenrath (1994). Further background information is provided in Hastenrath (1984, 1991a). The ground control network is described in Hastenrath et al. (1989).
The aerial photograph was flown on 9 September 1993 by Photomap (K) Ltd. at an average height of 1400 m above the average terrain level of 4800 m. The photographs were taken by a Wild 152 mm RC10 camera, and are at an approximate average scale of 1:10,000 with 80% forelap and 70% sidelap, to cope with the extreme local relief.
Aerial triangulation was conducted to determine the coordinates of control points. In addition to 14 ground control points a further 31 control points established from stereo models were used. Refer to Hastenrath et al. (1989) for a discussion of co-ordinate systems.
A new glacier inventory was compiled from the map dated September 1993, and the glacier changes during 1987–1993 were evaluated with reference to Hastenrath et al. (1989).

Characteristic parameters of Mount Kenya's glaciers, 1987

No.	Name	Area [10^3 m^2]	Length [m]	Highest elevation [m]	Lowest elevation [m]
1	Krapf	23	300	4800	4620
2	Gregory	45	420	4890	4713
4	Lewis	243	950	4962	4611
6	Darwin	26	200	4740	4640
7	Diamond	3	100	5120	4980
8	Forel	16	100	5000	4820
9	Heim	16	80	4800	4720
10	Tyndall	78	500	4790	4513
13	Cesar	24	300	4780	4580
14	Joseph	10	200	4775	4620
16	Northey	11	150	4930	4680
Total		495			

Characteristic parameters of Mount Kenya's glaciers, 1993

No.	Name	Area [10^3 m^2]	Length [m]	Highest elevation [m]	Lowest elevation [m]
1	Krapf	21	275	4800	4628
2	Gregory	35	335	4920	4720
4	Lewis	203	915	4950	4620
6	Darwin	23	185	4840	4630
7	Diamond	3	100	5120	5100
8	Forel	15	100	5000	4820
9	Heim	15	80	4780	4720
10	Tyndall	65	450	4790	4518
13	Cesar	18	275	4780	4620
14	Joseph	6	200	4775	4640
16	Northey	9	150	4920	4700
Total		413			

Decreases in length $\Delta L(m)$, area ΔA (10^3 m^2), thickness $\Delta Z(m)$, and volume $\Delta V(10^3$ $m^3)$ of Mount Kenya's glaciers during 1987-1993

No.	Name	ΔL	ΔA	ΔZ	ΔV
1	Krapf	25	2	5.0	115
2	Gregory	30	10	3.4	154
4	Lewis	25	40	8.6	2095
6	Darwin	15	3	1.6	42
7	Diamond	0	0	-	-
8	Forel	0	1	-	-
9	Heim	0	1	-	-
10	Tyndall	50	13	8.2	65
13	Cesar	25	6	2.9	76
14	Joseph	0	4	1.6	13
16	Northey	0	2	1.8	21
All glaciers			82	5.3	2601

GLACIERS OF MOUNT KENYA 1947, KENYA, 1:5000

(Aerial Photogrammetric Maps)

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The construction of this map is documented in Rostom and Hastenrath (1995), and the ground control network is described in Hastenrath et al. (1989).
The map is based on aerial photography flown by the Royal Air Force, U.K. on 21 February 1947. The flight level was 27,000 feet, the average scale 1:25,000, and the focal length 154.2 mm. Seven ground control points used in the 1987 map (Hastenrath et al. 1989) served as basis for the evaluation of the 1947 photographs.
A glacier inventory was compiled from the map dated February 1947, and the glacier changes were evaluated with reference to the 1987 map (Hastenrath et al. 1989). This information is summarized in the following tables.

Characteristic parameters of Mount Kenya's glaciers, 1947

No.	Name	Area [10^3 m^2]	Length [m]	Highest elevation [m]	Lowest elevation [m]
1	Krapf	43	450	4930	4600
2	Gregory	94	540	4930	4645
4	Lewis	400	1195	4980	4580
5	Melhuish	5	220	4860	4770
6	Darwin	40	260	4835	4620
7	Diamond	7	140	5150	4965
8	Forel	37	100	5190	4800
9	Heim	25	80	4800	4715
10	Tyndall	101	570	4810	4470
13	Cesar	49	395	4835	4520
14	Joseph	34	450	4795	4555
16	Northey	39	380	5060	4545

Decreases in length ΔL(m), area ΔA (10^3 m^2), thickness ΔZ(m), and volume ΔV(10^3 m^3) of Mount Kenya's glaciers during 1947–1987

No.	Name	ΔL	ΔA	ΔZ	ΔV
1	Krapf	150	20	2.8	122
2	Gregory	120	49	8.3	784
4	Lewis	245	157	11.7	4692
5	Melhuish	220	5	2.2	11
6	Darwin	60	14	9.6	385
7	Diamond	40	4	3.7	26
8	Forel	0	21		
9	Heim	0	9	0.1	3
10	Tyndall	70	23	3.3	331
13	Cesar	95	25	3.6	176
14	Joseph	250	24	5.1	172
16	Northey	230	28	5.9	228
All glaciers			379	8.6	6894

CHAPTER 9 **GENERAL COMMENTS AND PERSPECTIVES FOR THE FUTURE**

The observation period documented in the present report reflects continued glacier melting. Mass balance records for the period 1980–1995 from 33 glaciers in North America, Eurasia and Africa even point to losses at an accelerated rate (IAHS(ICSI)/UNEP/UNESCO 1991, 1993b, 1994, 1996). The mean specific net balance (-287 mm) of the relevant reference glaciers for the five years 1990/91–1994/95 corresponds to an additional energy flux (2 to 3 W/m^2) which roughly corresponds to the estimated anthropogenic greenhouse forcing and was slightly higher than the decadal mean of 1980–1990 (-277 mm). The difference corresponds to an increase in additional energy flux of about 0.15 W/m^2 or about 0.02 W/m^2 per year. The mean of all 33 considered glaciers, however, is strongly influenced by the great number of Alpine and Scandinavian glaciers. A mean value calculated using only one single (in some places averaged) value for each of the 11 mountain ranges involved provides a mean specific net balance of the 11 mountain ranges involved of -427 mm for the five year period of 1990/91–1994/95, clearly higher than the decadal mean of 1980–1990 (-368 mm). The difference corresponds to an increase in additional energy flux of about 0.7 W/m^2 for the first 5 years of the 1990s or around 0.1 W/m^2 per year. Further analysis requires detailed consideration of such aspects as glacier sensitivity and feedback mechanisms. The cumulative mass balances reported for the individual glaciers not only reflect regional climatic variability but also marked differences in the sensitivity of the observed glaciers.

1994 was a special year for the service, because international coordination of worldwide glacier monitoring had started exactly 100 years before, making glacier monitoring one of the oldest such services in the world. Already in 1893, the Swiss Glacier Commission had been established in order to coordinate long-term observations of glacier fluctuations at a national level. One year later, in 1894, the Sixth International Geological Congress at Zurich followed the example of the Swiss Glacier Commission with the purpose of coordinating long-term glacier observations at the international level. The goals of this worldwide glacier monitoring programme are defined by F.-A. Forel from Geneva, the first president of the newly established international glacier commission, in a remarkable article entitled “Les variations périodiques des glaciers. Discours préliminaire” (Archives des Sciences Physiques et Naturelles, Geneva, vol. 34, p. 209–229). In connection with this historical benchmark, a two-day workshop took place at ETH Zurich on October 12 and 13, 1995, in order to complete the final editing of an extended report for the UNESCO/IHPSRH series with the title *Into the 2nd Century of World Glacier Monitoring: Prospects and Strategies*. The document aims at reviewing and (where necessary) redesigning the basic strategy of the programme in view of future problems, especially regarding potential greenhouse warming and global water resources (Haeberli et al. 1998). Special chapters are devoted to “Les variations périodiques des glaciers” (Forel 1998), “Historical evolution and operational aspects of worldwide glacier monitoring” (Haeberli 1998), “Data management and application” (Hoelzle and Trindler 1998), “Statistical analysis of glacier mass balance data” (Reynaud and Dobrovolski 1998), “Modelling glacier fluctuations” (Oerlemans 1998), “Use of remote-sensing techniques” (Williams, Jr. and Hall 1998), “Glaciers in North America” (Ommaney et al. 1998), “Glaciers in South America” (Casassa et al. 1998), “Glaciers in Europe” (Hagen et al.

1998), “Glaciers in Africa and New Zealand” (Hastenrath and Chinn 1998), “Glaciers in Asia” (Tsvetkov et al. 1998), “Local glaciers surrounding the continental ice sheets” (Weidick and Morris 1998) and “Monitoring ice sheets, ice caps, and large glaciers” (Meier 1998).

A significant recommendation from the Second World Climate Conference in 1990 called for the urgent establishment of a systematic approach to meet the needs for climate system monitoring, for climate change detection, for climate modelling and prediction, and to provide information for national economic development. In 1992, a corresponding Global Climate Observing System (GCOS) was established by the World Meteorological Organization (WMO), the Intergovernmental Oceanographic Commission (IOC of UNESCO), the United Nations Environment Programme (UNEP) and the International Council of Scientific Unions (ICSU). This programme should make systematic and comprehensive global observations of the key variables available to nations. Observed glacier fluctuations contribute important information about central aspects connected with detection of natural and man-induced climate change (Haeberli et al. 1989; IPCC 1996), including

a) secular rates of change in energy fluxes at the earth/atmosphere-interface,
b) natural (pre-industrial) variability in these energy fluxes,
c) possible acceleration trends of ongoing and potential future changes, and
d) spatial patterns of observed changes as related to regional patterns of computer-simulated climate change.

In fact, glacier fluctuations in cold mountain areas result from changes in the mass and energy balance at the earth’s surface. Rates and ranges of such glacier changes can be determined quantitatively over various time intervals and expressed as corresponding energy fluxes with their long-term variability. This permits direct comparison with other effects of natural and estimated anthropogenic greenhouse forcing. In addition, glacier changes are linked to changing atmospheric conditions via important filters, such as pronounced memory and enhancement functions. As a consequence, glacier changes are among the clearest signals of ongoing warming trends existing in nature (cf. Haeberli 1994, 1995). Steps are, therefore, now being undertaken to make worldwide glacier monitoring part of Global Climate Observation System GCOS. Worldwide collection of standardized observations on changes in mass, volume, area and length of glaciers with time (glacier fluctuations), as well as statistical information on the distribution of perennial surface ice in space (glacier inventories) is best combined with attempts to model climate/glacier-relationships based on current understanding of the physical processes involved. The past few years have seen remarkable progress in this field.

Concerning glacier mass balance, the hypsometry represents the local/individual or topographic part of the glacier sensitivity, whereas the mass balance gradient mainly reflects the regional or climatic part (Kuhn 1990), cf. also Boudreaux and Raymond (1997). As the mass balance gradient tends to increase with increasing humidity, the sensitivity of glacier mass balance with respect to changes in equilibrium line altitude is generally much higher in areas with humid/maritime than with dry/continental climatic conditions (Oerlemans 1993a). Cumulative mass changes lead to ice thickness changes which, in

turn, exert a positive feedback on mass balance and at the same time influence the dynamic redistribution of mass by glacier flow (Oerlemans 1996). Process-oriented mass balance observations are expensive and time-consuming. As a consequence, they should concentrate on characteristic effects of climatic variability. Mass balance gradients and their temporal changes under conditions of maritime/ continental, tropical/polar climates etc., as well as their long-term evolution with potential climatic changes are of primary interest with respect to 2-dimensional considerations and models (Oerlemans 1993b). The 3-dimensional distribution of mass balance patterns as a function of energy balance components such as snowfall, snow redistribution, solar radiation, sensible heat flux, etc,. are nowadays investigated with digital terrain models and corresponding calculations of solar radiation, air temperature, etc. (Arnold et al. 1996). An ultimate goal of such investigations is to parameterize unmeasured glaciers and, thus, to better describe ongoing changes at a worldwide scale.
The complex chain of dynamic processes linking glacier mass balance and length changes is at present numerically simulated for only a few individual glaciers, which have been studied in great detail (Greuell 1992, Oerlemans and Fortuin 1992, Raper et al. 1996, Schmeits and Oerlemans 1997). Most complications, however, disappear if the time intervals analyzed correspond to the dynamic response time of the involved glaciers (Johannesson et al. 1989). Secular glacier mass changes deduced from cumulative length change compare well with the few measured long-term mass balance series existing in the Alps and confirm the regional representativity of the ongoing mass balance programmes (Haeberli and Hoelzle 1995, cf. also Ding and Haeberli 1996). Another new possibility is to dynamically fit mass balance histories to present-day geometries and historical length change measurements of long-observed glaciers using time-dependent flow models (Oerlemans 1997a, 1997b, Schmeits and Oerlemans 1997, Zuo and Oerlemans 1997). It is hoped that the corresponding backward extension of mass balance records will be useful for investigating the question about secular rates of change and possible acceleration trends.

An extensive data base on topographic glacier parameters is being built up in regional glacier inventories (IAHS(ICSI)/UNEP/UNESCO 1989). Scaling relationships from continuum dynamics of ice can be used to link the distribution of surface areas to global and regional distributions of other properties such as glacier volumes or characteristic thicknesses, flow velocities or response times (Bahr 1997). Based on this approach, Meier and Bahr (1996) estimated the total number (160,000), area (680,000 km^2), volume (180,000 km^3) and sea-level equivalent (0.5 m) of glaciers worldwide. The relative contribution of polar, subpolar, temperate-maritime and temperate-continental climatic regions was also assessed. Dyurgerov and Meier (1997a) analyzed the characteristics of the mass balance observation network with respect to global glacier distribution and noted the main size categories and areas underrespresented or not represented at all, for instance, the Karakorum, Tibetan Plateau, Kunlun, Southeast Pamir and Hindu Kush and the Patagonian Icefields. Repetition of glacier inventory work is planned at time intervals which are comparable to characteristic dynamic response times of mountain glaciers (a few decades). This should help with analyzing changes at a regional scale and with assessing the representativity of continuous measurements which can only be carried out on a few selected glaciers. In addition, glacier inventory data also serve as a statistical basis for extrapolating the results of observations or model calculations concerning individual glaciers (Oerlemans 1994). Dyurgerov and Meier (1997b) estimated a global average for the glacier mass balance during 1960–1990. They especially found an increase in ice loss in close correlation with global air temperature anomalies. The so-calculated rate of change in global glacier mass balance is around -5 mm w.e./year, corresponding to an increase in additional energy flux of about 0.05 W/m^2 per year. Such a rate of change agrees quantitatively with the estimated evolution of the radiative forcing (IPCC 1996).

Glacier contribution to sea-level rise was estimated at some 0.25mm per year with an accelerating tendency since the mid-1980s. Glaciers in continental-type climatic regions appear to have decreased steadily whereas maritime-type glaciers in humid areas show important variability. Glacier inventory data also serve to simulate regional aspects of past and potential future climate change effects. Such an application requires the introduction of a parametrization scheme using the four main geometric parameters contained in detailed inventories (length; maximum and minimum altitude along the central flowline; surface area) and using correspondingly simple algorithms for deriving such parameters as overall slope, mean and maximum thickness, equilibrium line altitude, mass balance at the glacier terminus, response time, etc. A corresponding test study with the European Alps (Haeberli and Hoelzle 1995) indicates a total alpine glacier volume of some 130 km^3 at the mid-1970s. Total loss in alpine surface ice mass from 1850 to the mid-1970s can be estimated at about half the original value. Most of this change took place during the second half of the 19th century and the first half of the 20th century (Patzelt and Aellen 1990), i.e., in times of weak anthropogenic forcing. The short intervals of fast warming which occurred during this period may have been predominantly natural but could have included anthropogenic effects as well. An acceleration of this development with annual mass losses of around 1 meter per year or more as anticipated with pessimistic – although not unrealistic scenarios – for the coming century could eliminate major parts of the presently existing alpine ice volume within decades. The striking sensitivity of glacierization in cold mountain areas with respect to trends in atmospheric warming clearly appears. alpine glacier mass balances were strongly negative during the extremely warm decade 1980–1990. With an average value of -0.65 meters water equivalent (Haeberli 1994), the alpine ice cover may have lost about 10 to 20% of its volume as estimated for the 1970s (Haeberli and Hoelzle 1995). Most recently, extraordinarily important evidence has also emerged from sites other than glacier snouts, i.e., from the top of glacier accumulation areas (VAW 1993). Even at low altitudes, wind-exposed ice crests and firn/ice divides are not temperate but slightly cold and frozen to the underlying (permafrost) bedrock (Haeberli and Funk 1991). Such glaciological conditions (reduced heat flow through winter snow, no meltwater percolation, no basal sliding, low to zero basal shear stress at firn/ice divides) explain the perfect conservation of the “Oetztal ice man”, whose body had been buried by snow/ice in a small topographic bedrock depression on such a crest/ saddle at Hauslabjoch (Austrian Alps; 3,200 m a.s.l.) more than 5,000 years ago and thereafter remained in place until it melted free in 1991. At an even lower altitude (2,700 m a.s.l.) but at a comparable site (Lötschenpass, Swiss Alps) three well-preserved wooden bows and a number of other archaeological objects were discovered as early as 1934 and 1944. Recent ^{14}C-AMS dating of the three bows gave dendro-chronologically corrected ages of around 4,000 years (Bellwald 1992). Warming periods comparable to the 20th century clearly have occurred before. The recent archaeological findings from melting ice in saddle configurations nevertheless confirm that the extent of glaciers and permafrost in the Alps may be more reduced today than ever before during the Upper Holocene.

The quantitative relation between mass and length changes of glaciers over secular time scales opens up the possibility for better worldwide coverage through the application of remote sensing techniques, ideally combined with energy balance models for more detailed quantitative analysis. Remote sensing could combine aerial photography, available in many regions since the 1950s, with high-resolution satellite imagery such as Spot, Thematic Mapper, etc. The results of energy balance modelling could be applied to mass balance gradients and ablation at the terminus for quantifying retreat and mass loss of unmeasured glaciers. In this way, (semi-) secular mass balances could be estimated for remote areas and the global representativity of the few available direct measurements could be assessed. For this purpose, glaciers with optimal characteristics as “climate signals” must be selected, i.e. relatively clean glaciers with adequate response times (decades), clearly defined geometry (firn/ice divide) and stable dynamics (no avalanching, surge or calving instabilities). With accelerated warming, larger glaciers would continue downwasting rather than retreating. Repeated mapping or profiling with a combination of laser altimetry and kinematic GPS positioning (Echelmeyer et al. 1996) would give important information in such cases, especially with regard to meltwater production and sea level rise. In fact, systematic application of advanced remote sensing and modelling techniques will be the main challenge for worldwide glacier monitoring into the 21st century.

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APPENDIX **NOTES ON THE COMPLETION OF THE DATA SHEETS**

This appendix includes the explanatory notes on the completion of the data sheets. To have an overview of the data sheets, please refer to preceding volumes of "Fluctuations of Glaciers":

- Notes on the completion of the data sheet "General Information on the Observed Glaciers"
- Notes on the completion of the data sheet "Variations in the Position of Glacier Fronts 1990-1995"
- Notes on the completion of the data sheet "Variations in the Position of Glacier Fronts – Addenda from Earlier Years"
- Notes on the completion of the data sheet "Mass Balance Study Results – Summary Data 1990-1995"
- Notes on the completion of the data sheet "Mass Balance Study Results Addenda from Earlier Years"
- Notes on the completion of the data sheet "Mass Balance versus Altitude for selected Glaciers"
- Notes on the completion of the data sheet "Special Events"

In 1997 a homepage on the Internet (World Wide Web) was compiled by the WGMS. By contacting this Internet homepage it is now possible to have direct access to the WGMS data base. This data base mainly consists of World Glacier Inventory (WGI) and Fluctuations of Glaciers (FoG) data. Downloading of the data is possible to everyone who has an appropriate Internet browser.
For the "Fluctuations of Glacier" data, forms are set up on this Internet page, which allow to fill in the measured parameters and submit the data directly to the WGMS. To have access to these new forms on the Internet, individual user names and passwords were given to each national correspondent.

The new Internet homepage of the WGMS can be accessed via the following address: **http://www.geo.unizh.ch/wgms**.

WORLD GLACIER MONITORING SERVICE

GENERAL INFORMATION ON THE OBSERVED GLACIERS 1990-95

NOTES ON THE COMPLETION OF THE DATA SHEET

This data sheet should be completed for all glaciers on which data are submitted for inclusion in “Fluctuations of Glaciers 1990–1995”; however, questions 5 to 14 should be answered only for glaciers not included in Volumes V and VI, or for cases where new or improved information is now available.

1. **Country or Territory**
   Name of country or territory where the glacier is located (for abbreviation, see Volume VI, p. 4).

2. **Glacier Number (former PSFG number)**
   Numbering allows better identification of the glaciers and has proven to be especially helpful when dealing with glaciers having the same name, no name or names changing with time. National correspondents are therefore asked to give numbers to glaciers on which data are submitted for Volume VII. Once a Glacier Number has been assigned to a glacier it will not be changed again. Please, therefore, refer to earlier volumes of the “Fluctuations of Glaciers” when assigning the Glacier Number (= former PSFG number).

   For glaciers without a (PSFG) number, the following guidelines are given for assigning the number:

   Glacier Number = number with max. 4 numerical digits or, as an exception, 5 digits.

   In assigning the number to glaciers of present interest, it should be remembered that the need to number neighbouring glaciers may arise in the future. Accordingly, the numbering system which is adopted should leave “spare numbers”. This could be done by using the left-hand digit(s) to denote geographical subdivisions, and the right-hand digit(s) to number single glaciers within each subdivision. The total number of digits used, 2–4, will depend on the size of the country and the degree of sophistication in identifying the geographical subdivisions. A glacier may advance or retreat enough to make it necessary in future to identify individual parts, e.g., a single front may become several distinct fronts, or else part of the glacier may become separated from the main glacier. In these exceptional cases, the fifth digit (alphabetic or numeric) should be used.
   Format: right justified on column position 4, empty spaces should be filled with the digit 0.

3. **Glacier Number in already published inventories**
   Only where a glacier number has been assigned in connection with a previously published National Glacier Inventory should this number be given.

Format: max. 16 digits, left justified.

4. Glacier Name
The name of the glacier should be written in CAPITAL letters.
Format: max. 15 column positions, left justified. If necessary, the name can be abbreviated; in this case, please give the full name under "16. Remarks".

5. Geographical Location (general)
By "general geographical location" we mean the reference to a very large geographical entity (e.g., a large mountain range or a large political subdivision) which gives a rough idea of the location of the glacier without requiring the use of an atlas or map.
Examples: Western Alps, Southern Norway, Polar Ural, Tien Shan, Himalayas.
Format: similar to 4 (Glacier Name)

6. Geographical Location (more specific)
A more specific geographical location should be given here (mountain group, drainage basin, etc.) which can be found easily on a small-scale map of the country concerned.
Format: similar to 4 (Glacier Name)

7. Geographical Coordinates
The geographical coordinates should refer to a point in the upper ablation area; for small glaciers, this point may possibly lie outside the glacier.
As a general rule, the latitude and longitude should be indicated in sexagesimal degrees and minutes (no fraction of minutes) and be followed by the corresponding cardinal point.
Only where a small glacier is unnamed may it be necessary to give the coordinates more accurately for the sake of clear identification.
In such cases decimals of minutes – and not seconds – should be used.

8. Orientation
The main orientation of the accumulation area and of the ablation area should be given using the 8-point compass.

9. Highest Elevation
Altitude of the highest point of the glacier and the year of survey.

10. Median Elevation
Altitude of the contour line which halves the area of the glacier, and the year of survey.

11. Lowest Elevation
Altitude of the lowest point of the glacier and the year of survey.

12. Area
Total area of the glacier (in horizontal projection) and the year of survey.

13. Length

Maximum length of the glacier measured along the most important flowline (in horizontal projection) and the year of survey.

14. Rough Classification

This classification should be given in coded form according to “Perennial Ice and Snow Masses” (Technical Papers in Hydrology, UNESCO/IAHS, 1970). The following information should be given:

– “Primary classification” (Digit 1)
– “Form” (Digit 2)
– “Frontal characteristics” (Digit 3)

Format: The coded information should be given in the corresponding boxes (digit 1 in first box, digit 2 in second box, digit 3 in third box).

Code: (from “Perennial Ice and Snow Masses”, slightly revised)

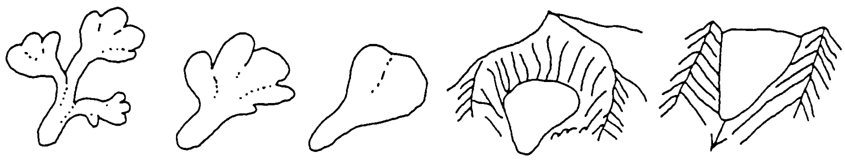
Digit 1: Primary classification

0	Miscellaneous	Any type not listed below (explain)
1	Contintental ice sheet	Inundates areas of continental size
2	Icefield	Ice masses of sheet or blanket type of a thickness not sufficient to obscure the sub-surface topography
3	Ice cap	Dome-shaped ice mass with radial flow
4	Outlet glacier	Drains an ice sheet, ice flield or ice cap, usually of valley glacier form; the catchment area may not be clearly delineated.
5	Valley glacier	Flows down a valley; the catchment area is well defined
6	Mountain glacier	Cirque, niche or crater type, hanging glacier; includes ice aprons and groups of small units
7	Glacieret and snowfield	Small ice masses of indefinite shape in hollows, river beds and on protected slopes, which has developed from snow drifting, avalanching and/or especially heavy accumulation in certain years; usually no marked flow pattern is visible; exists for at least two consecutive years.
8	Ice shelf	Floating ice sheet of considerable thickness attached to a coast nourished by glacier(s); snow accumulation on its surface or bottom freezing
9	Rock glacier	Lava-stream-like debris mass containing ice in several possible forms and moving slowly downslope

Digit 2: Form

0	Miscellaneous	Any type not listed below (explain)
1	Compound basins	Two or more individual valley glaciers issuing from tributary valleys and coalescing (Fig. 1a)
2	Compound basin	Two or more individual accumulation basins feeding

		one glacier system (Fig. 1b)
3	Simple basin	Single accumulation area (Fig. 1c)
4	Cirque	Occupies a separate, rounded, steep-walled recess which it has formed on a mountain side (Fig. 1d)
5	Niche	Small glacier in V-shaped gully or depression on a mountain slope (Fig. 1e); generally more common than the genetically further developed cirque glacier
6	Crater	Occurring in extinct or dormant volcanic craters
7	Ice apron	Irregular, usually thin ice mass which adheres to a mountain slope or ridge
8	Group	A number of similar small ice masses occurring in close proximity and too small to be assessed individually
9	Remnant	An inactive, usually small ice mass left by a receding glacier

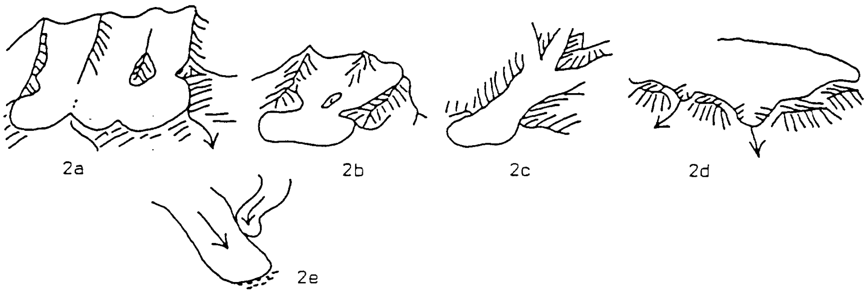


1a 1b 1c 1d 1e

Digit 3: Frontal characteristics

0	Miscellaneous	Any type not listed below (explain)
1	Piedmont	Icefield formed on a lowland by lateral expansion of one or coalescence of several glaciers (Fig. 2a, 2b)
2	Expanded foot	Lobe or fan formed where the lower portion of the glacier leaves the confining wall of a valley and extends on to a less restricted and more level surface (Fig. 2c)
3	Lobed	Part of an ice sheet or ice cap, disqualified as an outlet glacier (Fig. 2d)
4	Calving	Terminus of a glacier sufficiently extending into sea or lake water to produce icebergs; includes – for this inventory – dry land calving which would be recognizable from the "lowest glacier elevation"

5 Coalescing, non-contributing (Fig. 2e)
6 Irregular, mainly clean ice (mountain or valley glaciers)
7 Irregular, debris-covered (mountain or valley glaciers)
8 Single lobe, mainly clean ice (mountain or valley glaciers)
9 Single lobe, debris-covered (mountain or valley glaciers)



15. Number of data sheets submitted

Number of data sheets submitted for this glacier concerning information on Variations in the Position of Glacier Fronts, Mass Balance Study Results – Summary Data, etc.

16. Remarks

Any important information or comments not included above may be given here. Comments about the accuracy of the various numerical data may be made. No fields for quantitative accuracy ratings of the various data have been given on the data sheet; especially poor data should be marked with an asterisk on the right-hand side of the appropriate field. Only significant decimals should be given for area and length.

WORLD GLACIER MONITORING SERVICE

VARIATIONS IN THE POSITION OF GLACIER FRONTS 1990-95

NOTES ON THE COMPLETION OF THE DATA SHEET

1. Country or Territory

Name of country or territory where the glacier is located (for abbreviation, see Volume VI, p. 4).

2. Glacier Number (former PSFG number)

See "Notes on the completion of the data sheet: GENERAL INFORMATION ON THE OBSERVED GLACIERS".

3. Glacier Name

The name of the glacier should be written in CAPITAL letters.

4. Observed since

Year of the first known quantitative survey.

5. Date of Initial Survey for Reported Period

"Initial survey" is defined here as the last survey performed before 1991, whereby the position or the variation in the position of the glacier front was determined quantitatively.

The "initial survey" will normally be the 1990 survey. If no survey was carried out in 1990, or if only qualitative data are available for 1990, the "initial survey" will, of course, be an earlier quantitative one.

6. Variation (Survey previous to 19.. Survey)

(refers also to 9, 12, 15 and 18)

Variation in horizontal projection between previous survey and present survey.

Units: meters

Sign : + advance

- retreat

Missing data:

if no data are available for a particular year, the corresponding data field should be deleted.

Qualitative data:

if no quantitative data are available for a particular year, but qualitative data are available, then variations should be denoted by using the following symbols placed in the positions on the far left of the corresponding data field:

ST : no apparent variation (stationary)

+X : apparent advance (numerical value unknown)

- X : apparent retreat (numerical value unknown)

SN : glacier tongue is covered with snow making survey impossible.

In the case of qualitative data, the variations will be understood with reference to the previous survey, whether quantitative or qualitative.

7. **Altitude of Snout/Lowest Point**
(refers also to 10, 13, 16 and 19)
If the altitude of the snout or the lowest point of the glacier has also been measured, it should be indicated in the corresponding data field and the inappropriate term (i.e., snout or lowest point) should be deleted.

Missing data: delete the corresponding field.

8. **Date of Survey**
(refers also to 11, 14, 17 and 20)
For each survey performed, please indicate the complete date (day, month, year).

Missing data:
no survey: delete corresponding field.
Day unknown or day and month unknown: put question mark(s) in corresponding field(s).

21. **Error**
Estimated maximum error

22. **Method**
The following indications should be given here:
a = aerial photogrammetry
b = terrestrial photogrammetry
c = geodetic ground survey (theodolite, tape, etc.)
d = combination of a, b or c (please explain under "25. Remarks")
e = other methods (please explain under "25. Remarks") or no information

23. **Investigator(s)**
Name(s) of the person(s) or agency doing the field work and/or the name(s) of the person(s) or agency processing the data.

24. **Sponsoring Agency**
Full name, abbreviation and address of the agency where the data are held.

25. **Remarks**
Any important information or comments not included above may be given here. If a regular survey has been discontinued for some reason, this should be indicated here.

WORLD GLACIER MONITORING SERVICE

MASS BALANCE STUDY RESULTS SUMMARY DATA 1990-95

NOTES ON THE COMPLETION OF THE DATA SHEET

The present data sheet strives to accommodate inherent ambiguities in mass balance data by providing several data fields. It is not expected that all fields on the data sheet can be completed fully.

The terminology used here mainly follows that given in the UNESCO/IAHS publication "Combined heat, ice and water balances at selected basins" (Technical Papers in Hydrology No. 5, 1970, Appendix 2). To avoid confusion and to assure continuity of the reported data, the same terms are used as in Volumes III, IV, V and VI. It remains the task of national correspondents to define the exact meaning of the given information as carefully as possible.

1. Country or Territory

Name of country or territory where the glacier is located (for abbreviation, see Volume VI, p. 4).

2. Glacier Number (former PSFG number)

See "Notes on the completion of the data sheet: GENERAL INFORMATION ON THE OBSERVED GLACIERS".

3. Glacier Name

The name of the glacier should be written in CAPITAL letters.

4. Start of continuous mass balance measurements

Year when continuous measurement of mass balance started.

5. Time System

The appropriate code number should be entered here:
1 = stratigraphic system
2 = fixed date system
3 = combined system
4 = other (please explain under "22. Remarks")

Where it is not clear whether the method of measurement corresponds to the "stratigraphic" or to the "fixed date" system, the box for "other" should be marked and an appropriate comment made under "22. Remarks". Note that observations with the "combined system" (Mayo et al. 1972) contain more information than can be given in the data sheet.

6. Number of Measurement Points

Number of measurement sites in the accumulation (left) and ablation (right) areas.

Repeated measurements may be made at a single site for the purpose of obtaining an average value for the site, but each site may be counted only once.

When the number of measurement points is not constant over the reported period, the range should be given.

Format: left justified.

7. **Beginning of Balance/Measurement Year**
   Day and month of the beginning of the balance year (stratigraphic system), if known, or day and month of the beginning of the measurement year (fixed date system).

8. **End of Winter Season**
   Day and month of the end of the winter season (if known).

9. **End of Balance/Measurement Year**
   Day and month of the end of the balance year (stratigraphic system), if known, or day and month of the end of the measurement year (fixed date system).

10. **Winter Balance (specific)**
    ("specific" means "total" value divided by the total area of the glacier).

11. **Summer Balance (specific)**
    Similar to 10.

14. **Net/Annual Balance (specific)**
    Similar to 10.
    Sign: put the correct sign in the sign box
    + : mass increase
    - : mass decrease

15. **Accumulation Area**

16. **Ablation Area**

17. **Total Area**

18. **Accumulation Area Ratio**
    Accumulation area (15.) divided by the total area (17.) multiplied by 100.

19. **Equilibrium Line/Annual Equilibrium Line**
    Mean altitude (averaged over the glacier) of the equilibrium line/annual equilibrium line.

20. **Investigator(s)**
    Name(s) of the person(s) or agency doing the field work and/or the name(s) of the person(s) or agency processing the data.

21. Sponsoring Agency
Full name, abbreviation and address of the agency where the data are held.

22. Remarks
Any important information or comments not included above may be given here. If a regular survey has been discontinued for some reason, it should be indicated here.

WORLD GLACIER MONITORING SERVICE

SPECIAL EVENTS 1990-95

NOTES ON THE COMPLETION OF THE DATA SHEET

This data sheet should be completed in cases of extraordinary events, especially those concerning glacier hazards and dramatic changes of glaciers (cf. Point 4.).

1. **Country or Territory**
   Name of country or territory where the glacier is located (for abbreviation, see Volume VI, p. 4).

2. **Glacier Number (former PSFG number)**
   See 'Notes on the completion of the data sheet: GENERAL INFORMATION ON THE OBSERVED GLACIERS'.

3. **Glacier Name**
   The name of the glacier should be written in CAPITAL letters.

4. **Type of Event**
   Enter one (or more) of the following numbers:
   1 = glacier surge
   2 = calving instability
   3 = glacier flood, debris flow, mudflow
   4 = large ice avalanche
   5 = tectonic impact (earthquake, volcanic eruption)
   6 = other

5. **Short Description**
   Please give quantitative information wherever possible, for example:
   – surge: date and location of onset, duration, flow or advance velocities, discharge anomalies, periodicity;
   – calving instability: rate of retreat, iceberg discharge, ice flow velocity and water depth at calving front;
   – glacier flood, debris flow, mudflow: outburst volume, outburst mechanism, peak discharge, sediment load, reach and propagation velocity of flood wave or front of debris flow/mudflow;
   – ice avalanche: volume released, runout distance, overall slope of avalanche path;
   – tectonic impact: volumes, runout distances and overall slopes of rock slides on glacier surfaces, amount of geothermal melting in craters, etc.

6. **Reference or Most Important Data Source**
   Please indicate at least one or two references or sources which could help the reader to locate more detailed information, or give the name(s) of contact person(s) who would be able to supply additional information.

7. Remarks

Amount or kind of possible destruction, particular technical measures taken against glacier hazards, or special studies carried out in connection with this event could be mentioned.

WORLD GLACIER MONITORING SERVICE

GENERAL INFORMATION ON THE OBSERVED GLACIERS 1990-95

TABLE A

NR	Record number
GLACIER NAME	15 alphabetic or numeric digits
PSFG NUMBER	5 digits identifying glacier with alphabetic prefix denoting country
LAT	Latitude in degrees and minutes north or south
LONG	Longitudes in degrees and minutes east or west
CODE	3 digits giving “primary classification”, “form” and “frontal characteristics”, respectively
EXP AC	Exposition of accumulation area (cardinal points)
EXP AB	Exposition of ablation area (cardinal points)
ELEVATION MAX	Maximum elevation of glacier in meters
ELEVATION MED	Median elevation of glacier in meters
ELEVATION MIN	Minimum elevation of glacier in meters
AREA	Total area of glacier in square kilometers
LEN	Length of glacier along a flowline from maximum to minimum elevation in kilometers
TYPE OF DATA	B = Variations in the positions of glacier fronts 1990–1995 or Variations in the position of glacier fronts: addenda from earlier years
	C = Mass Balance summary data 1990–1995 or Mass Balance summary data: addenda from earlier years
	D = Changes in area, volume and thickness
	F = Index measurements or special events – see Chapter 7

NR	GLACIER NAME	PSFG NR	LAT	LONG	CODE	EXP AC	EXP AB	ELEVATION MAX	ELEVATION MED	ELEVATION MIN	AREA KM^2	LEN KM	TYPE OF DATA
	CANADA												
1	BABY GLACIER	CD00205	79.26 N	90.58 W	6 5 0	SW	SW	1170	1020	710	0.63	1.4	C
2	DEVON ICE CAP	CD00431	75.25 N	83.15 W	3 0 3	NW	NW	1890	1200	0	1696.1	50	C
3	HELM	CD00855	49.58 N	123.00 W	6 2 6	NW	NW	2150	1900	1770	2.5	2.4	C
4	OVERLORD	CD01590	50.01 N	122.50 W	5 3 8	NW	NW	2630	2190	1636	2.6	2.9	B
5	PEYTO	CD01640	51.40 N	116.32 W	5 3 8	NE	NE	3190	2640	2130	13.35	5.3	C
6	PLACE	CD01660	50.26 N	122.36 W	5 3 8	NE	NW	2610	2089	1860	3.7	4.2	C
7	WEDGEMOUNT	CD02333	50.09 N	122.47 W	5 1 8	N	NW	2680	2220	1865	2.6	2.6	B F
8	WHITE	CD02340	79.27 N	90.40 W	5 1 5	SE	SE	1780	1160	80	38.9	15.4	C
	U.S.A.												
9	BLUE GLACIER	US02126	47.49 N	123.41 W	5 2 8	NE	N	2380	1815	1235	5.5	4.3	B
10	CANTWELL	US00320	63.26 N	149.23 W		SE	SE	2042	1509	975	3.03	4.97	B
11	GAKONA	US00215	63.15 N	145.12 W	5 2 9	S	S	2550	1585	1040	112	32	F
12	GULKANA	US00200	63.15 N	145.25 W	5 2 9	S	SW	2460	1840	1165	19.3	8.5	C
13	MCCALL	US00001	69.17 N	143.50 W	5 2 8	NW	N	2700	2010	1350	7.23	7.6	B C D
14	MIDDLE TOKLAT	US00315	63.23 N	149.55 W		NW	N	2347	1806	1265	10.85	7.67	B
15	NOISY CREEK	US02078	48.40 N	121.32 W	6 4 8	N	N	1890	1791	1683	0.53	1.14	C
16	NORTH KLAWATTI	US02076	48.34 N	121.07 W	5 5	SE	SE	2399	1729	1729	1.46	2.77	C
17	SANDALEE	US02079	48.25 N	120.48 W	6 4 5	N	N	2280	2154	1965	0.2	0.79	C
18	SILVER	US02077	48.59 N	121.15 W	6 4 8	N	NE	2698	2309	2080	0.48	1.08	C
19	SOUTH CASCADE	US02013	48.22 N	121.03 W	5 3 8	N	N	2125	1920	1639	2.03	3.1	B C
20	VARIEGATED	US01302	60.00 N	139.18 W	5 2 9	W	W	2000	1000	50	28	20	F
21	WOLVERINE	US00411	60.24 N	148.55 W	5 3 8	S	S	1700	1310	400	17.24	8	C
	MEXICO												
22	VENTORILLO	MX00101	19.01 N	98.37 W	6 6 6	NW	NW	5380	5070	4760	0.44	0.8	F
	COLOMBIA												
23	ALFOMBRALES E	CO0013B	4.52 N	75.20 W	6 3 6	S	SW			4621			B
24	AZUFRADO E	CO0005B	4.54 N	75.19 W	6 5 9	N	NE			4620			B
25	AZUFRADO W	CO0005A	4.54 N	75.19 W	6 5 9	N	NE			4830			B
26	LA CABANA	CO00007	4.54 N	75.18 W	6 3 9	E	NE	5260	4955	4650	0.87	2.6	B
27	LA PLAZUELA	CO00006	4.54 N	75.18 W	6 3 9	NE	NE	5180	5025	4870	0.32	0.9	B
28	LAGUNILLAS	CO00008	4.53 N	75.18 W	5 3 9	E	E	5220	4915	4610	1.08	2	B F
29	LEONERA ALTA	CO00009	4.53 N	75.18 W	6 3 6	SE	SE	5218	5024	4830	1.32	1.72	B
30	NEREIDAS	CO00014	4.53 N	75.20 W	5 3 7	SW	W	5300	5040	4780	2.4	2.5	B
	ECUADOR												
31	ANTIZANA15 ALPHA	EC00001	0.29 S	78.09 W	4 7 8	NW	NW	5760	5200	4800	0.353	2	C
	PERU												
32	BROGGI	PE00003	8.59 S	77.35 W	6 3 0	NW	NW	5100	4880	4582	0.55	1	B
33	URUASHRAJU	PE00005	9.35 S	77.19 W	5 3 0	SW	SW	5700	5200	4576	2.14	2.4	B

NR	GLACIER NAME	PSFG NR	LAT	LONG	CODE	EXP AC	EXP AB	ELEVATION MAX	ELEVATION MED	ELEVATION MIN	AREA KM²	LEN KM	TYPE OF DATA
34	YANAMAREY	PE00004	9.39 X	77.16 W	5 2 0	SW	SW	5100	4900	4590	1.29	1.5	B
	BOLIVIA												
35	CHACALTAYA	RB05180	16.21 S	68.07 W	6 4 8	S	S	5395	5320	5125	0.082	0.59	B C
36	ZONGO	RB05150	16.15 S	68.10 W	5 3 8	S	E	6000	5450	4890	2.1	3	B C
	CHILE												
37	AMALIA	RC00056	50.57 S	73.45 W	4 2 4	W	W				157	21	B
38	ASIA	RC00055	50.49 S	73.44 W	4 2 4	W	W	2179		0	133	12	B
39	BALMACEDA	RC00060	51.23 S	73.18 W	4 2 4	E	E				63	12	B
40	BERNARDO	RC00037	48.37 S	73.56 W	4 2 4	W	W	2408		0	536	51	B
41	CALVO	RC00053	50.41 S	73.21 W	4 2 4	W	W				117	13	B
42	DICKSON	RC00063	50.47 S	73.09 W	4 2 4	SE	SE				71	10	B
43	EUROPA	RC00049	50.18 S	73.52 W	4 2 4	W	W				403	39	B
44	GREVE	RC00040	48.58 S	73.55 W	4 2 4	NW	NW	3380		0	438	51	B
45	GREY	RC00062	51.01 S	73.12 W	4 2 4	SE	SE			100	269	28	B
46	HPS12	RC00043	49.41 S	73.45 W	4 2 4	SW	SW	2257		0	204	23	B
47	HPS13	RC00045	49.43 S	73.40 W	4 2 4	W	W	2656		0	141	19	B
48	HPS15	RC00046	49.48 S	73.42 W	4 2 4	NW	NW	2446		0	174	19	B
49	HPS19	RC00047	50.00 S	73.55 W	4 2 4	W	W			0	176	26	B
50	HPS28	RC00051	50.25 S	73.35 W	4 2 4	W	W	2238		0	63	12	B
51	HPS29	RC00052	50.28 S	73.36 W	4 2 4	W	W	2950		0	82		B
52	HPS31	RC00050	50.36 S	73.33 W	4 2 4	SW	SW	2950		0	161	23	B
53	HPS34	RC00054	50.43 S	73.32 W	4 2 4	NW	NW				137	14	B
54	HPS38	RC00057	51.03 S	73.45 W	4 2 4	W	W				62	16	B
55	HPS41	RC00058	51.18 S	73.34 W	4 2 4	SW	SW				71	17	B
56	HPS8	RC00041	49.02 S	73.47 W	4 2 4	SE	SE			0	38	11	B
57	HPS9	RC00042	49.03 S	73.48 W	4 2 4	W	W	3380		0	55	19	B
58	OCCIDENTAL	RC00039	48.51 S	74.14 W	4 2 4	W	W			100	244	49	B
59	OFHIDRO	RC00036	48.25 S	73.51 W	4 2 4	NW	NW	1655		45	116	26	B
60	PENGUIN	RC00048	50.05 S	73.55 W	4 2 4	NW	NW	3180		0	527	38	B
61	PINGO	RC00061	51.02 S	73.21 W	4 2 4	SE	SE			200	71	11	B
62	PIO XI	RC00044	49.13 S	74.00 W	4 2 4	W	W	3380		0	1265	64	B
63	SNOWY	RC00059	51.22 S	73.34 W	4 2 4	W	W				23	9	B
64	TEMPANO	RC00038	48.44 S	74.03 W	4 2 4	W	W	2408		0	332	47	B
	ARGENTINA												
65	FRIAS	RA00064	50.45 S	75.05 W	4 2 8	E	E				48	9	B
	GREENLAND												
66	HANS TAUSEN IC.	G00015	85.56 N	36.27 W	3 2 3	NE	N	1320		100	95	21	F
67	MITTIVAKKAT	G00019	65.40 N	37.50 W	2 2 3	SW	SW	970		30	30	7.5	F
68	NIOGHALVFJERDSF	G00017	79.20 N	23.00 W	1 0 4		E			0			F
69	STORSTROEMMEN	G00018	77.30 N	24.00 W	1 0 4		SE			0			F

NR	GLACIER NAME	PSFG NR	LAT	LONG	CODE	EXP		ELEVATION			AREA	LEN	TYPE OF
						AC	AB	MAX	MED	MIN	KM²	KM	DATA
70	UNNAMED G16	G00016	78.55 N	24.05 W	1 0 3		E			310			F
	<u>ICELAND</u>												
71	BREIDAMJOK.E.A	IS1126A	64.13 N	16.20 W	4 2 4	S	SE	1730		0	540	40	B
72	BREIDAMJOK.E.B	IS1126B	64.13 N	16.20 W	4 2 4	S	SE	1730		0	540	40	B
73	BREIDAMJOK.W.A	IS1125A	64.10 N	16.28 W	4 2 4	E	SE	1900		60	160	20	B
74	BREIDAMJOK.W.C	IS1125C	64.10 N	16.28 W	4 2 3	SE	SE	1730		40	210	30	B
75	BROKARJOKULL	IS01427	64.15 N	15.93 W	4 3 3	S	SE	1200		200	5	3	B
76	BRUARJOKULL	IS02400	64.40 N	16.10 W	4 3 3	N	N	1900	1255	550	1700	45	C
77	DYNGJUJOKULL	IS02600	64.40 N	17.00 W	4 2 3	N	N	2000	1475	700	1040		C
78	EYJABAKKAJOKULL	IS02300	64.39 N	15.35 W	4 2 3	N	NE	1520	1095	680	109	18	C
79	FALLJOKULL	IS01021	63.59 N	16.45 W	4 3 3	W	W	2000		140	8	8	B
80	FJALLS.FITJAR	IS1024B	64.02 N	16.31 W	4 3 4	SE	E	2040		40	48	15	B
81	FJALLSJ. BRMFJ	IS1024A	64.02 N	16.31 W	4 3 4	SE	E	2040		40	45	15	B
82	FJALLSJ.G-SEL	IS1024C	64.02 N	16.31 W	4 3 4	SE	E	2040		40	48	15	B
83	FLAAJOKULL	IS1930A	64.20 N	14.68 W	4 3 2	SE	SE	1520		50	180	29	B
84	GIGJOKULL	IS00112	63.39 N	19.37 W	4 3 4	N	N	1666		190	7.5	7.5	B F
85	GLJUFURARJOKULL	IS00103	65.43 N	18.40 W	5 4 8	N	N	1350		600	3	2.5	B
86	HAGAFELLSJOK.E	IS00306	64.34 N	20.13 W	4 3 3	SW	SW	1350		440	105	19	B
87	HAGAFELLSJOK.W	IS00204	64.34 N	20.24 W	4 3 3	SW	SW	1350		450	150	18	B
88	HALSJOKULL	IS00117	65.52 N	18.28 W	6 4 8	N	N	1010		760	0.5	1	B
89	HOFFELLSJ.W	IS02031	64.29 N	15.34 W	4 3 3	SE	SE	1500		20	200	19	B
90	HOFSJOKULL E	IS0510B	64.48 N	18.35 W	4 3 3	E	E	1800	1185	640	250	19	C
91	HOFSJOKULL N	IS0510A	64.57 N	18.55 W	4 3 3	N	N	1800	1250	860	90.6	19.9	C
92	HOFSJOKULL SW	IS0510C	64.43 N	19.03 W	4 3 3	SW	SW	1750	1205	750	51	13	C
93	HRUTARJOKULL	IS00923	64.01 N	16.32 W	4 3 3	E	E	1900		100	12	8.5	B
94	HYRNINGSJOKULL	IS00100	64.48 N	23.46 W	4 3 3	E	E	1445		700	2	2	B
95	JOKULKROKUR	IS00007	64.48 N	19.44 W	4 3 3	NE	NE	1350		720	55	11	B
96	KALDALONSJOKULL	IS00102	66.08 N	22.16 W	4 3 3	SW	SW	900		140	37	6	B F
97	KOELDUKVISLARJ.	IS02700	64.35 N	17.50 W	4 3 3	NW	NW	2000	1410	900	334	25	C
98	KVERKJOKULL	IS02500	64.41 N	16.38 W	4 3 3	N	N	1920		900	29	11	B
99	KVIARJOKULL	IS00822	63.58 N	16.34 W	4 3 3	SE	SE	2100		40	24	13	B
100	LEIRUFJ.JOKULL	IS00200	66.11 N	22.23 W	4 3 3	NW	NW	925		140	27	6	B F
101	MORSARJOKULL	IS00318	64.07 N	16.53 W	4 3 3	SW	SW	1380		180	30	10	B
102	MULAJOKULL S.	IS0311A	64.40 N	18.43 W	4 3 2	SE	SE	1800		610	70	20	B F
103	NAUTHAGAJOKULL	IS00210	64.40 N	18.46 W	4 3 3	S	S	1780		630	25	18	B
104	OLDUFELLSJOKULL	IS00114	63.44 N	18.55 W	4 3 2	NE	E	1400		320	40	15	B F
105	REYKJAFJARDARJ.	IS00300	66.11 N	22.12 W	4 3 3	NE	NE	925		100	22	7	B F
106	SATUJOKULL	IS00530	64.55 N	18.50 W	4 3 3	N	N	1800		860	91	20	B
107	SIDUJOK.E M177	IS0015B	64.11 N	17.53 W	4 3 2	SW	S	1700		650	350	40	B F
108	SKAFTAFELLSJ.	IS00419	64.05 N	16.48 W	4 2 3	SW	SW	1900		100	85	18	B
109	SKALAFELLSJOKUL.	IS1728A	64.17 N	14.59 W	4 3 3	SE	E	1480		60	100	25	B
110	SKEIDARARJ. E1	IS0117A	64.13 N	17.13 W	4 3 2	S	S	1725		100	850	50	B F
111	SKEIDARARJ. E2	IS0117B	64.13 N	17.13 W	4 3 2	S	S	1725		100	850	50	B F

NR	GLACIER NAME	PSFG NR	LAT	LONG	CODE	EXP AC	EXP AB	ELEVATION MAX	ELEVATION MED	ELEVATION MIN	AREA KM²	LEN KM	TYPE OF DATA
112	SKEIDARARJ. E3	IS0117C	64.13 N	17.13 W	4 3 2	S	S	1725		100	850	50	B F
113	SKEIDARARJ. W	IS00116	64.13 N	17.13 W	4 3 2	S	S	1740		80	530	45	B F
114	SOLHEIMAJOK. W	IS0113A	63.35 N	19.17 W	4 3 3	SW	SW	1500		110	44	15	B
115	SVINAFELLSJ.	IS0520A	64.02 N	16.45 W	4 2 3	W	SW	2119		120	24	12	B
116	THRANDARJOKULL	IS01940	64.42 N	14.53 W	3 0 0			1240	1080	820	19		C
117	TUNGNAARJOKULL	IS02214	64.19 N	18.04 W	4 3 3	SW	W	1720	1210	580	235	40	B C F
118	VIRKISJOKULL	IS00721	64.00 N	16.45 W	4 3 3	W	W	2119		150	6	8.5	B
	<u>NORWAY</u>												
119	AALFOTBREEN	N36204	61.45 N	5.39 E	4 3 6	NE	NE	1380	1230	890	4.82	2.9	C
120	AU.BROEGGERBR.	N15504	78.53 N	11.50 E	5 2 9	NW	N	600	260	60	6.1	6	C
121	AUSTDALSBREEN	N37323	61.48 N	7.21 E	4 2 4	SE	SE	1630	1480	1160	11.95	5.7	C
122	AUSTERDALSBREEN	N31220	61.37 N	6.56 E	4 3 8	SE	SE	1920	1600	390	26.84	8.5	B
123	BAKLIBREEN	N31013	61.39 N	7.05 W	4 3 4	SE	SE	1960		1190	3.19	3.5	F
124	BRIGSDALSBREEN	N37110	61.39 N	6.55 E	4 3 8	W	W	1910	1650	350	11.94	6	B
125	ENGABREEN	N67011	66.39 N	13.51 E	4 3 8	N	NW	1594	1220	40	32.02	11.5	B C
126	FAABERGSTOELSB.	N31015	61.43 N	7.14 E	4 3 8	E	E	1810	1540	760	15	7	B
127	GRAASUBREEN	N00547	61.39 N	8.36 E	6 7 6	NE	E	2300	2060	1850	3.03	2.3	C
128	HANSBREEN	N12419	77.05 N	15.40 E	4 2 4	S	S	600	350	0	56.76	15.8	B C
129	HANSEBREEN	N36206	61.45 N	5.41 E		NE	N	1320	1160	925	3.32	2.5	C
130	HARDANGERJOEKUL	N22303	60.32 N	7.22 E	4 3 8	W	W	1850	1740	1050	18.52	8.1	C
131	HELLSTUGUBREEN	N00511	61.34 N	8.26 E	5 1 8	N	N	2130	1900	1470	3.13	3.4	B C
132	KONGSVEGEN	N15510	78.48 N	12.59 E	4 2 4	NW	NW	1050	500	0	189	27	C
133	LANGFJORDJOEKUL	N85008	70.07 N	21.46 E	4 3 8	SE	E	1062	850	300	4.8	4	C
134	LEIRBREEN	N00548	61.34 N	8.06 E		NW	NW	2070		1530	4.87	3.8	B
135	M.LOVENBREEN	N15506	78.53 N	12.04 E	5 2 9	NE	N	650	330	50	5.8	4.8	C
136	NIGARDSBREEN	N31014	61.43 N	7.08 E	4 3 8	SE	SE	1950	1618	355	48.2	9.6	B C
137	OKSTINDBREEN	N64902	66.14 N	14.22 E	4 3 8	N	NE	1750	1340	730	14	7.25	C
138	SPOERTEGGBREEN	N31027	63.36 N	7.27 E	3 0 3			1770	1575	1260	27.94	6.8	C
139	STEGHOLTBREEN	N31021	61.48 N	7.19 E	4 3 8	S	S	1900	1480	880	15.34	7.7	B
140	STORBREEN	N00541	61.34 N	8.08 E	5 2 6	NE	NE	1970	1770	1380	5.26	3	B C
141	STORSTEINSFJELL	N07381	68.13 N	17.55 E	5 2 8	E	SE	1850	1380	930	5.9	5.3	C
142	STYGGEDALSBREEN	N30720	61.29 N	7.53 E	5 2 6	N	N	2240	1650	1270	1.81	3.2	B
143	SVARTISHEIBREEN	N65509	66.33 N	13.46 E		SE	W	1420	1040	770	5.48	4	C
144	TROLLBERGDALSBR	N68507	66.43 N	14.27 E	5 3 8	SE	SE	1300	1050	900	1.82	2.1	C
	<u>SWEDEN</u>												
145	HYLLGLACIAEREN	S00780	67.35 N	17.28 E	5 3 8	N	N	1820		1360	1.4	2.1	B
146	ISFALLSGLAC.	S00787	67.55 N	18.34 E	5 3 6	E	E	1700		1180	1.4	2.1	B
147	KARSOJIETNA	S00798	68.21 N	18.19 E	5 3 8	NE	E	1500	1100	940	1.23	1.7	B C
148	MARMAGLACIAEREN	S00799	68.50 N	18.40 E	5 2 1	E	E	1740		1340	3.93	3.5	C
149	MIKKAJEKNA	S00766	67.24 N	17.42 E	5 1 8	S	S	1825		970	7.1	4.3	B
150	PARTEJEKNA	S00763	67.10 N	17.40 E	5 2 8	E	E	1800		1095	11	5.1	B
151	PASSUSJIETNA E.	S00797	68.03 N	18.26 E	5 3 8	NE	NW	1630		1270	1.7	1.8	B

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152	PASSUSJIETNA W	S00796	68.03 N	18.23 E	5 3 8	E	NE	1750		1250	1.6	2.4	B
153	RABOTS GLACIAER	S00785	67.54 N	18.33 E	5 2 8	NW	W	1700		1071	3.9	4.1	B C
154	RIUKOJIETNA	S00790	68.05 N	18.05 E	3 0 3	E	E	1456		1130	4.2	3	B C
155	RUOPSOKJEKNA	S00764	67.20 N	17.59 E	5 3 6	NE	N	1760		1150	3.5	3.7	B
156	RUOTESJEKNA	S00767	67.25 N	17.28 E	5 3 8	NE	N	1600		1040	5.2	4.3	B
157	SALAJEKNA	S00759	67.07 N	16.23 E	5 2 8	SE	S	1580		880	24.5	9.2	B
158	SE KASKASATJ GL	S00789	67.56 N	18.36 E	5 3 6	SE	S	1890	1560	1440	0.6	1.4	B
159	STORGLACIAEREN	S00788	67.54 N	18.34 E	5 2 8	E	E	1720		1135	3.1	3.7	B C
160	STOUR RAEITAGL.	S00784	67.58 N	18.23 E	5 3 9	N	E	1690		1280	1.8	2.2	B
161	SUOTTASJEKNA	S00768	67.28 N	17.35 E	5 2 8	NE	N	1800		1120	7.9	4.2	B
162	TARFALAGL	S00791	67.56 N	18.39 E	6 7 0	E	E	1710		1390	0.86	1	C
163	UNNA RAEITA GL.	S00783	67.58 N	18.26 E	5 3 8	N	NE	1720		1230	1.7	1.9	B
164	VARTASJEKNA	S00765	67.27 N	17.40 E	5 3 8	NE	NE	1800		1300	3.6	3	B
	FRANCE												
165	ARGENTIERE	F00002	45.58 N	6.56 E	5 1 9	NW	NW	3100	2600	1550	15.6	9.4	B
166	BLANC	F00031	44.57 N	6.13 E	5 3 8	E	S	4100	3000	2300	7.7	6	B
167	BOSSONS	F00004	45.52 N	6.47 E	5 2 8	N	N	4800	3200	1190	10.53	7.2	B
168	GEBROULAZ	F00009	45.17 N	6.38 E	5 3 9	N	N	3580	3000	2600	2.76	4	B
169	MER DE GLACE	F00003	45.53 N	6.56 E	5 1 9	N	N	3600	3000	1480	33	12	B
170	SAINT SORLIN	F00015	45.11 N	6.10 E	5 2 9	N	N	3460	2900	2650	3	2.9	B C
171	SARENNES	F00029	45.07 N	6.10 E		S	S	3190	3000	2830	0.5	1.5	C
	SWITZERLAND												
172	ALLALIN	CH00011	46.03 N	7.56 E	6 2 6	N	E	4190	3320	2338	9.94	6.5	B
173	ALPETLI(KANDER)	CH00109	46.29 N	7.48 E	5 3 6	NW	SW	3270	2800	2250	14.02	6.8	B
174	AMMERTEN	CH00111	46.25 N	7.32 E	6 0 7	NW	NW	3240	2720	2350	1.89	2.8	B
175	AROLLA (BAS)	CH00027	45.59 N	7.30 E	5 1 9	N	N	3720	3080	2135	6.02	5	B
176	BASODINO	CH00104	46.25 N	8.29 E	6 3 6	NE	NE	3230	2880	2520	2.3	1.6	B
177	BELLA TOLA	CH00021	46.15 N	7.39 E	6 4 6	N	N	3000	2840	2660	0.31	0.6	B
178	BIFERTEN	CH00077	46.49 N	8.57 E	5 3 8	E	NE	3610	2840	1920	2.86	4.2	B
179	BIRCH	CH00354	46.24 N	7.51 E	6 5 0	NW	NW	3680	2940	2520	0.54	1.6	F
180	BIS	CH00107	46.07 N	7.44 E	6 2 4	E	E	4510	3440	2060	4.79	3.8	B
181	BLUEMLISALP	CH00064	46.30 N	7.46 E	6 1 6	NW	NW	3660	2960	2250	2.98	2.9	B
182	BODMER	CH00355	46.05 N	8.15 E	6 5 0	N	NE	3180	2860	2480	0.64	1.7	F
183	BOVEYRE	CH00041	45.58 N	7.16 E	5 2 9	NW	NW	3660	3220	2612	1.99	2.5	B
184	BRENEY	CH00036	45.58 N	7.25 E	5 1 7	S	SW	3830	3240	2575	9.8	6.3	B
185	BRESCIANA	CH00103	46.30 N	9.02 E	6 3 6	W	W	3400	3080	2740	0.94	1.6	B
186	BRUNEGG	CH00020	46.09 N	7.42 E	5 3 0	NW	NW	4130	3160	2460	6.12	4.9	B
187	BRUNNI	CH00072	46.44 N	8.47 E	6 2 4	E	N	3300	2760	2340	2.99	2.9	B
188	CALDERAS	CH00095	46.32 N	9.43 E	6 1 7	N	NE	3360	3070	2732	1.2	2	B
189	CAMBRENA	CH00099	46.24 N	10.00 E	6 1 4	NE	NE	3500	2960	2520	1.72	2.5	B
190	CAVAGNOLI	CH00119	46.27 N	8.29 E	6 2 8	NE	E	2880	2720	2590	1.32	2.3	B
191	CHEILLON	CH00029	46.00 N	7.25 E	5 1 7	N	N	3830	2960	2630	4.73	4	B

NR	GLACIER NAME	PSFG NR	LAT	LONG	CODE	EXP AC	EXP AB	ELEVATION MAX	ELEVATION MED	ELEVATION MIN	AREA KM²	LEN KM	TYPE OF DATA
192	CORBASSIERE	CH00038	45.59 N	7.18 E	5 1 9	N	N	4310	3200	2169	17.44	9.8	B
193	CORNO	CH00120	46.27 N	8.23 E	6 5 6	N	N	2880	2720	2570	0.27	0.7	B
194	DAMMA	CH00070	46.38 N	8.27 E	6 1 6	E	NE	3520	2820	2040	6.32	3.3	B
195	EIGER	CH00059	46.34 N	7.59 E	6 1 6	W	NW	4100	3100	2175	2.27	2.6	B
196	EIGER (WEST)	CH00353	46.34 N	7.59 E	6 3 7	W	W	3940		2560	0.35		F
197	EN DARREY	CH00030	46.01 N	7.23 E	6 3 9	NE	NE	3700	3120	2490	1.86	2.4	B
198	FEE NORTH	CH00013	46.05 N	7.53 E	6 0 6	NE	NE	4360	3260	1927	16.66	5.1	B
199	FERPECLE	CH00025	46.01 N	7.35 E	5 3 8	NW	N	3680	3300	2095	9.79	6	B
200	FIESCHER	CH00004	46.30 N	8.09 E	5 1 9	SE	S	4180	3140	1676	33.06	16	B
201	FINDELEN	CH00016	46.00 N	7.52 E	5 1 6	NW	W	4190	3300	2491	19.09	9.3	B
202	FIRNALPELI	CH00075	46.47 N	8.28 E	6 0 6	NW	N	2920	2680	2165	1.18	1.1	B
203	FORNO	CH00102	46.18 N	9.42 E	5 1 9	N	N	3360	2740	2225	8.77	6.8	B
204	GAMCHI	CH00061	46.31 N	7.48 E	6 1 9	N	N	2840	2260	1990	1.73	2.7	B
205	GAULI	CH00052	46.37 N	8.11 E	5 1 6	E	E	3630	2880	2140	13.7	6.8	B
206	GIETRO	CH00037	46.00 N	7.23 E	6 3 4	NW	W	3830	3240	2500	5.94	5.4	B
207	GLAERNISCH	CH00080	47.00 N	8.59 E	6 2 6	W	W	2910	2600	2344	2.09	2.3	B
208	GORNER	CH00014	45.58 N	7.48 E	5 1 9	N	NW	4610	3220	2140	68.86	14.1	B
209	GRAND DESERT	CH00031	46.05 N	7.21 E	6 3 6	NW	N	3340	2960	2760	1.85	2.3	B
210	GRAND PLAN NEVE	CH00045	46.15 N	7.09 E	6 4 7	N	N	2560	2460	2350	0.2	0.4	B
211	GRIES (AEGINA)	CH00003	46.26 N	8.20 E	5 3 4	NE	NE	3370	2920	2389	6.249	6.2	B C D F
212	GRIESS(KLAUSEN)	CH00074	46.50 N	8.50 E	6 1 7	N	NW	3080	2420	2219	2.48	1.3	B
213	GRIESSEN(OBWA.)	CH00076	46.51 N	8.30 E	6 2 6	W	NW	2890	2600	2500	1.27	1.3	B
214	GROSSER ALETSCH	CH00005	46.30 N	8.02 E	5 1 9	SE	S	4160	3140	1556	86.76	24.7	B C F
215	GRUBEN	CH00352	46.10 N	7.59 E	6 3 9	W	NW	3993	3360	2780	1.32	2.8	F
216	HUEFI	CH00073	46.49 N	8.51 E	5 1 8	S	SW	3240	2780	1640	13.73	7	B
217	KALTWASSER	CH00007	46.15 N	8.05 E	6 0 6	NW	W	3370	2940	2660	1.85	1.6	B F
218	KEHLEN	CH00068	46.41 N	8.25 E	5 1 8	SE	SE	3418	2800	2078	3.15	3.3	B
219	KESSJEN	CH00012	46.04 N	7.56 E	6 5 6	NE	NE	3240	2980	2872	0.61	0.9	B
220	LAEMMERN	CH00063	46.24 N	7.33 E	6 1 6	E	E	3240	2900	2522	3.35	2.5	B
221	LANG	CH00018	46.28 N	7.56 E	5 1 9	SW	SW	3900	2960	2038	10.03	7.7	B
222	LAVAZ	CH00082	46.38 N	8.56 E	6 1 8	NE	N	3020	2580	2340	1.76	2.6	B
223	LENTA	CH00084	46.31 N	9.03 E	5 2 7	N	N	3400	2820	2310	1.4	2.6	B
224	LIMMERN	CH00078	46.49 N	8.59 E	6 2 7	NE	NE	3420	2760	2270	2.621	2.9	B
225	LISCHANA	CH00098	46.46 N	10.21 E	6 5 9	NW	NW	3030	2880	2750	0.21	0.6	B
226	MARTINETS	CH00046	46.13 N	7.06 E	6 4 7	NE	NE	2740	2420	2110	0.59	0.8	B
227	MITTELALETSCH	CH00106	46.27 N	8.02 E	5 2 7	SE	SE	4200	2100	2284	8.5	5.9	B
228	MOIRY	CH00024	46.05 N	7.36 E	5 1 8	N	N	3850	3120	2330	6.11	5.6	B
229	MOMING	CH00023	46.05 N	7.40 E	6 0 9	N	NW	4070	3160	2420	5.77	3.8	B
230	MONT DURAND	CH00035	45.55 N	7.20 E	5 1 9	E	NE	4280	3060	2340	7.59	6	B
231	MONT FORT	CH00032	46.05 N	7.19 E	6 3 6	NW	N	3330	2900	2780	1.1	2	B
232	MONT MINE	CH00026	46.01 N	7.33 E	5 1 9	NW	N	3720	3220	1963	10.89	8.1	B
233	MORTERATSCH	CH00094	46.24 N	9.56 E	5 1 9	N	N	4020	3000	2000	17.15	7	B
234	MUTT	CH00002	46.33 N	8.25 E	6 5 6	NW	NW	3000	2780	2577	0.57	1.1	B
235	OB.GRINDELWALD	CH00057	46.37 N	8.06 E	5 1 8	NW	NW	3740	3000	1250	10.07	5.5	B

NR	GLACIER NAME	PSFG NR	LAT	LONG	CODE	EXP		ELEVATION			AREA	LEN	TYPE OF
						AC	AB	MAX	MED	MIN	KM²	KM	DATA
236	OBERAAR	CH00050	46.32 N	8.13 E	5 2 4	NE	NE	3460	2860	2300	5.23	5.2	B
237	OFENTAL	CH00009	46.01 N	8.00 E	6 5 9	N	N	3030	2820	2693	0.4	0.9	B
238	OTEMMA	CH00034	45.57 N	7.27 E	5 1 7	SW	SW	3800	3020	2460	16.55	8.5	B
239	PALUE	CH00100	46.22 N	9.59 E	6 2 9	E	E	3870	3180	2330	6.62	4	B
240	PANEYROSSE	CH00044	46.16 N	7.10 E	6 4 6	N	N	2760	2560	2380	0.45	0.7	B
241	PARADIES	CH00086	46.30 N	9.04 E	6 0 6	N	NE	3400	2880	2683	4.6	3.6	B
242	PARADISINO	CH00101	46.25 N	10.07 E	6 3 9	NW	W	3250	2980	2825	0.55	1	B
243	PIERREDAR	CH00049	46.19 N	7.11 E	6 4 4	N	N	3020	2760	2400	0.67	0.7	B
244	PIZOL	CH00081	46.58 N	9.24 E	6 5 6	N	N	2790	2600	2600	0.32	0.6	B
245	PLATTALVA	CH00114	46.50 N	8.59 E	6 5 6	E	E	2980	2740	2565	0.808	1.1	B
246	PORCHABELLA	CH00088	46.38 N	9.53 E	6 1 6	N	N	3390	2880	2639	2.59	2.5	B
247	PRAPIO	CH00048	46.19 N	7.12 E	6 5 7	NW	NW	3020	2780	2400	0.36	0.9	B
248	PUNTEGLIAS	CH00083	46.47 N	8.57 E	6 1 7	SE	S	3010	2520	2357	0.93	2	B
249	RAETZLI	CH00065	46.23 N	7.31 E	6 2 6	N	NW	2970	2760	2460	9.8	4	B
250	RHONE	CH00001	46.37 N	8.24 E	5 1 4	S	S	3620	2940	2180	17.38	10.2	B
251	RIED	CH00017	46.08 N	7.51 E	5 3 9	NW	NW	4280	3460	2081	8.26	6.3	B
252	ROSEG	CH00092	46.23 N	9.50 E	5 1 7	N	N	3650	3060	2159	8.72	5.2	B
253	ROSENLAUI	CH00056	46.39 N	8.09 E	5 2 6	NE	N	3700	3000	1860	6.2	5.2	B
254	ROSSBODEN	CH00105	46.11 N	8.01 E	5 3 9	N	NE	3990	3080	1920	1.89	3.9	B
255	ROTFIRN NORD	CH00069	46.40 N	8.26 E	6 1 9	E	NE	3525	2680	2031	1.21	2.3	B
256	SALEINA	CH00042	45.59 N	7.04 E	5 1 8	E	NE	3900	2940	1705	5.03	6.4	B
257	SANKT ANNA	CH00067	46.36 N	8.36 E	6 3 6	N	N	2905	2720	2580	0.44	0.9	B
258	SARDONA	CH00091	46.55 N	9.16 E	6 4 6	E	E	2790	2580	2500	0.38	0.7	B
259	SCHWARZ	CH00062	46.25 N	7.40 E	5 1 9	SW	NW	3670	2800	2240	1.6	3.9	B
260	SCHWARZBERG	CH00010	46.01 N	7.56 E	6 2 6	NE	NE	3650	3080	2655	6.2	4.3	B
261	SESVENNA	CH00097	46.43 N	10.25 E	6 5 6	NE	N	3150	2940	2760	0.67	1.2	B
262	SEX ROUGE	CH00047	46.20 N	7.13 E	6 5 6	N	NW	2890	2820	2650	0.72	1.2	B
263	SILVRETTA	CH00090	46.51 N	10.05 E	6 2 6	NW	W	3160	2780	2442	3.25	3.5	B C
264	SIRWOLTE	CH00356	46.12 N	8.00 E	6 4 0	NE	NE	3020	2780	2620	0.45	0.8	F
265	STEIN	CH00053	46.42 N	8.26 E	5 2 8	N	N	3490	2880	1934	6.52	4.7	B
266	STEINLIMMI	CH00054	46.42 N	8.24 E	5 1 7	N	N	3300	2640	2094	2.21	2.7	B
267	SULZ	CH00079	46.53 N	9.03 E	6 5 8	N	N	2480	2000	1785	0.2	0.5	B
268	SURETTA	CH00087	46.31 N	9.23 E	6 1 7	NE	NE	3010	2720	2199	1.17	1.6	B
269	TAELLIBODEN	CH00008	46.00 N	7.59 E	6 5 6	NW	NW	2940	2760	2631	0.26	0.8	B
270	TIATSCHA	CH00096	46.50 N	10.06 E	6 3 4	S	S	3130	2900	2500	2.11	2.2	B
271	TIEFEN	CH00066	46.37 N	8.26 E	5 1 9	SE	SE	3530	2960	2500	3.17	3.4	B
272	TRIENT	CH00043	46.00 N	7.02 E	5 3 8	N	N	3490	3140	1767	6.58	5	B
273	TRIFT (GADMEN)	CH00055	46.40 N	8.22 E	5 1 8	N	N	3505	2900	1670	17.19	7.1	B
274	TSANFLEURON	CH00033	46.19 N	7.14 E	6 0 6	NE	E	3020	2760	2420	3.78	3.6	B
275	TSCHIERVA	CH00093	46.24 N	9.53 E	5 1 8	NW	NW	4000	3060	2146	6.83	5	B
276	TSCHINGEL	CH00060	46.30 N	7.51 E	6 2 7	N	E	3510	2680	2269	6.18	3.8	B
277	TSEUDET	CH00040	45.54 N	7.15 E	6 1 7	N	N	3730	2900	2440	1.73	3	B
278	TSIDJIORE NOUVE	CH00028	46.00 N	7.27 E	5 2 8	N	NE	3800	3260	2205	3.12	5	B
279	TURTMANN (WEST)	CH00019	46.08 N	7.41 E	5 2 8	NW	N	4190	3380	2262	6.98	5.8	B

NR	GLACIER NAME	PSFG NR	LAT	LONG	CODE	EXP		ELEVATION			AREA	LEN	TYPE OF
						AC	AB	MAX	MED	MIN	KM²	KM	DATA
280	UNT.GRINDELWALD	CH00058	46.35 N	8.04 E	5 1 9	N	N	4100	2780	1240	21.71	9	B
281	UNTERAAR	CH00051	46.34 N	8.13 E	5 1 7	E	E	4090	2660	1931	28.41	13.5	B
282	VAL TORTA	CH00118	46.28 N	8.32 E	6 4 9	N	N	2740	2580	2540	0.17	0.6	B
283	VALLEGGIA	CH00117	46.28 N	8.31 E	6 4 8	NE	NE	2820	2560	2425	0.59	1.2	B
284	VALSOREY	CH00039	45.54 N	7.16 E	5 1 8	NE	NW	3730	3100	2395	2.34	4.1	B
285	VERSTANKLA	CH00089	46.51 N	10.04 E	6 1 7	NW	NW	3100	2680	2395	1.06	2	B
286	VORAB	CH00085	46.53 N	9.10 E	6 0 6	E	SE	2980	2720	2560	2.51	2	B
287	WALLENBUR	CH00071	46.43 N	8.28 E	6 1 9	E	SE	3280	2580	2240	1.7	2.2	B
288	ZINAL	CH00022	46.04 N	7.38 E	5 1 9	N	N	4260	3060	2035	16.24	8	B
289	ZMUTT	CH00015	46.00 N	7.38 E	5 1 7	NE	E	4100	2980	2235	17.22	8.5	B
	AUSTRIA												
290	AEU.PIRCHLKAR	A00229	47.00 N	10.55 E	6 0 6	SE	NE	3260	3030	2720	0.94	1.9	B
291	ALP.KRAEUL F.	A00321	47.03 N	11.09 E	6 4 8	NW	NW	3410	2960	2650	0.52	1.5	B
292	ALPEINER F.	A00307	47.03 N	11.08 E	5 2 8	N	NE	3340	2930	2310	3.94	4.6	B
293	BACHFALLEN F.	A00304	47.05 N	11.05 E	6 0 8	N	N	3120	2850	2580	2.55	2.9	B
294	BAERENKOPF K.	A00702	47.08 N	12.43 E	6 2 4	N	N	3400	3030	2270	2.5	3.1	B
295	BERGLAS F.	A00308	47.04 N	11.07 E	6 0 8	E	NE	3290	2990	2490	1.47	2.5	B
296	BIELTAL F.	A0105A	46.53 N	10.08 E	6 0 6	NW	NW	3000	2740	2544	0.73	1.1	B
297	BOCKKOGEL F.	A00302	47.02 N	11.07 E	6 4 4	NW	NW	3250	2920	2480	1.46	2	B
298	BRENNKOGL K.	A00727	47.06 N	12.48 E	6 4 6	N	N	2960	2670	2430	0.59	1.2	B
299	DAUNKOGEL F.	A0310A	47.00 N	11.06 E	6 0 8	NE	NE	3240	2880	2550	2.69	2.9	B
300	DIEM F.	A00220	46.49 N	10.57 E	6 0 8	NW	NW	3540	3060	2710	3.5	3.4	B
301	DORFER K.	A00509	47.06 N	12.20 E	6 2 8	SE	SE	3600	2790	2270	6.24	4	B
302	E.GRUEBL F.	A00317	46.59 N	11.14 E	6 0 9	NW	NW	3250	2660	2260	1.41	3.2	B
303	EISKAR G.	A01301	46.37 N	12.54 E	6 4 6	N	N	2390	2250	2160	0.151	0.4	B
304	FERNAU F.	A00312	46.59 N	11.08 E	6 4 8	NW	N	3310	2850	2380	2.02	2.5	B
305	FREIGER F.	A00320	46.58 N	11.12 E	6 0 6	NE	NE	3370	3090	2720	0.59	1.5	B
306	FREIWAND K.	A00706	47.06 N	12.45 E	6 4 8	SE	SE	3130	2890	2690	0.35	1.1	B
307	FROSNITZ K.	A00507	47.05 N	12.24 E	6 3 6	E	E	3330	2780	2400	4.19	4.4	B
308	FRUSCHNITZ K.	A00722	47.05 N	12.40 E	1 0 0	SW	W	3510	3170	2550	2.87	3.2	B
309	FURTSCHAGL K.	A00406	47.00 N	11.46 E	6 0 8	NW	NW	3480	2890	2542	1	1.6	B
310	GAISKAR F.	A00325	46.58 N	11.07 E	6 4 8	SE	SE	3190	3070	2890	0.75	1.1	B
311	GAISSBERG F.	A00225	46.50 N	11.04 E	5 2 8	NW	NW	3390	2850	2460	1.35	3.3	B
312	GEPATSCH F.	A00202	46.51 N	10.46 E	5 2 8	NE	N	3520	3090	2060	17.817	8.2	B
313	GOESSNITZ K.	A01201	46.58 N	12.45 E	6 4 7	NW	NW	3060	2690	2520	0.86	1.5	B
314	GR GOLDBERG KEE	A0802B	47.02 N	12.28 E	6 4 8	SE	NE	3080	2680	2310		2.8	B
315	GR.GOSAU G.	A01101	47.29 N	13.36 E	6 4 6	NW	NW	2810	2520	2250	1.48	2.2	B
316	GROSSELEND K.	A01001	47.02 N	13.19 E	6 3 6	NW	NW	3140	2720	2410	2.76	2.4	B
317	GRUENAU F.	A00315	46.59 N	11.12 E	6 4 8	N	N	3420	2980	2380	1.897	2.3	B
318	GURGLER F.	A00222	46.48 N	10.59 E	5 2 8	NW	N	3420	2990	2270	11.865	8	B
319	GUSLAR F.	A00210	46.51 N	10.48 E	6 4 8	E	SE	3480	3120	2780	2.801	2.5	B
320	HABACH KEES	A00504	47.09 N	12.22 E	6 3 6	N	N	3240	2670	2170	5.03	2.4	B
321	HALLSTAETTER G.	A01102	47.29 N	13.37 E	6 0 8	NE	NE	2910	2560	2080	3.3	2.3	B

NR	GLACIER NAME	PSFG NR	LAT	LONG	CODE	EXP		ELEVATION			AREA	LEN	TYPE OF
						AC	AB	MAX	MED	MIN	KM²	KM	DATA
322	HINTEREIS F.	A00209	46.48 N	10.46 E	5 2 8	E	NE	3710	3050	2426	8.72	7.13	B C D
323	HOCHALM K.	A01005	47.01 N	13.20 E	6 3 6	E	E	3350	2880	2540	3.16	2.4	B
324	HOCHJOCH F.	A00208	46.47 N	10.49 E	5 2 6	N	NW	3500	3030	2580	7.13	3.8	B
325	HOCHMOOS F.	A00309	47.03 N	11.09 E	6 0 9	E	NE	3460	2940	2520	1.74	3	B
326	HOFMANNS K.	A00724	47.04 N	12.43 E	6 0 8	E	NE	3700	3140	2510	1.13	2.1	B
327	HORN K.(SCHOB.)	A01202	46.58 N	12.46 E	6 4 8	N	NW	3010	2780	2600	0.46	1.1	B
328	HORN K.(ZILLER)	A00402	47.00 N	11.49 E	5 3 8	N	N	3210	2790	2110	3.873	3.1	B
329	INN.PIRCHLKAR	A00228	47.00 N	10.55 E	6 5 6	E	NE	3340	2990	2720	0.62	1.8	B
330	JAMTAL F.	A00106	46.52 N	10.10 E	5 2 8	N	N	3120	2780	2370	3.8	2.8	B C
331	KA.TAUERN K.S	A0602B	47.07 N	12.36 E	6 4 6	E	NE	2940	2780	2590	0.22	0.7	B
332	KAELBERSPITZ K.	A01003	47.02 N	13.17 E	6 0 8	N	N	2890	2690	2450	0.82	2.2	B
333	KARLES F.	A00207	46.56 N	10.55 E	6 4 6	N	NW	3350	2950	2620	1.54	2	B
334	KARLINGER K.	A00701	47.08 N	12.42 E	6 2 4	NE	N	3340	2800	2060	4.04	3.6	B
335	KESSELWAND F.	A00226	46.50 N	10.48 E	6 3 8	SE	E	3490	3180	2698	4.29	4.25	B C
336	KL.FLEISS K.	A00801	47.03 N	12.57 E	6 0 6	W	W	3080	2840	2510	1.57	2.3	B
337	KLEINEISER K.	A00717	47.09 N	12.40 E	6 4 6	NW	NW	2880	2730	2620	0.25	0.7	B
338	KLEINELEND K.	A01002	47.04 N	13.15 E	6 3 4	NE	NE	3190	2750	2150	3.04	2.7	B
339	KLOSTERTALER M.	A0102B	46.52 N	10.04 E	6 0 8	W	W	3220	2940	2640	0.45	1.6	B
340	KLOSTERTALER N.	A0102A	46.52 N	10.04 E	6 0 8	NW	NW	3220	2880	2600	0.62	1.7	B
341	KLOSTERTALER S.	A0102C	46.52 N	10.04 E	6 0 8	N	N	2820	2630	2460	0.4	1.1	B
342	KRIMMLER K EAST	A0501B	47.05 N	12.15 E	6 3 6	W	W	3280	2550	2290	7.52	2.2	B
343	KRIMMLER K.	A0501A	47.05 N	12.15 E	6 2 6	NW	NW	3490	2550	1910	7.52	3.5	B
344	KRUML K.	A00806	47.04 N	12.56 E	6 0 6	NW	NW	3252	2800	2460	1.03	1.4	B
345	LAENGENTALER F.	A00305	47.05 N	11.06 E	6 4 7	NE	N	3200	2820	2540	0.89	2.2	B
346	LANDECK K.	A00604	47.08 N	12.35 E	6 4 6	N	N	2940	2600	2430	0.41	0.9	B
347	LANGTALER F.	A00223	46.48 N	11.01 E	5 3 8	N	NW	3420	2910	2450	3.52	5.1	B
348	LAPERWITZ K.	A00721	47.06 N	12.39 E	6 3 6	SW	SW	3470	3050	2620	2.05	1.7	B
349	LARAIN F.	A00107	46.54 N	10.13 E	6 3 7	N	N	3170	2750	2430	1.64	2.1	B
350	LIESENSER F.	A00306	47.05 N	11.08 E	6 2 6	NE	NE	3270	2930	2430	4.17	4.6	B
351	LITZNERGL.	A00101	46.53 N	10.02 E	6 4 7	N	N	2970	2630	2450	0.71	1.2	B
352	MARZELL F.	A00218	46.47 N	10.53 E	5 2 8	NW	N	3620	3160	2450	5.14	4.4	B
353	MAURER K.(GLO.)	A00714	47.11 N	12.41 E	6 4 6	W	W	2890	2730	2610	0.49	1.4	B
354	MAURER K.(VEN.)	A00510	47.05 N	12.18 E	6 0 8	S	S	3490	2840	2330	7.33	3.1	B
355	MITTELBERG F.	A00206	46.55 N	10.54 E	5 1 8	NE	N	3570	2900	2250	15.2	6.3	B
356	MITTERKAR F.	A00214	46.53 N	10.52 E	6 4 6	SE	SE	3580	3230	2960	1.1	2.1	B
357	MUTMAL F.	A00227	46.47 N	10.55 E	6 4 8	N	NW	3520	3080	2720	0.79	1.5	B
358	NIEDERJOCH F.	A00217	46.47 N	10.52 E	5 2 8	N	N	3600	3100	2690	2.9	3	B
359	OBERSULZBACH K.	A00502	47.07 N	12.18 E	5 1 8	NW	NW	3600	2730	1990	15.3	5.7	B
360	OCHSENTALERGL.	A00103	46.51 N	10.06 E	5 2 8	N	N	3160	2910	2290	2.61	2.8	B C
361	OEDENWINKEL K.	A00712	47.07 N	12.39 E	5 3 9	NW	NW	3180	2590	2130	2.22	3.8	B
362	PASTERZEN K.	A00704	47.06 N	12.42 E	5 2 8	SE	SE	3700	2990	2070	19.78	9.4	B
363	PFAFFEN F.	A00324	46.57 N	11.08 E	6 4 8	W	W	3470	3060	2770	1.21	1.8	B
364	PFANDLSCHARTEN	A00707	47.05 N	12.47 E	6 4 6	NW	W	2940	2660	2530	0.55	1.2	B
365	PRAEGRAT K.	A00603	47.07 N	12.35 E	6 0 6	W	W	3020	2800	2630	1.44	1.1	B

NR	GLACIER NAME	PSFG NR	LAT	LONG	CODE	EXP AC	EXP AB	ELEVATION MAX	ELEVATION MED	ELEVATION MIN	AREA KM²	LEN KM	TYPE OF DATA
366	RETTENBACH F.	A00212	46.56 N	10.56 E	6 4 6	N	N	3350	2920	2610	1.79	2.5	B
367	RIFFL K. N	A00718	47.08 N	12.40 E	6 4 6	W	SW	3070	2880	2710	0.26	0.8	B
368	RIFFLKAR KEES	A0713A	47.08 N	12.40 E	6 4 9	N	NW	3340	3220	2980	0.14	0.7	B
369	ROFENKAR F.	A00215	46.53 N	10.53 E	6 4 4	SE	SE	3750	3290	2820	1.26	2.2	B
370	ROTMOOS F.	A00224	46.49 N	11.03 E	6 2 8	N	N	3410	2960	2370	3.17	3.3	B
371	SCHALF F.	A00219	46.47 N	10.56 E	5 2 8	NW	NW	3500	3130	2500	8.47	5.6	B
372	SCHATTENSPITZ	A00108	46.53 N	10.05 E	6 4 9	N	NE	3060	2810	2570	0.66	1.1	B
373	SCHAUFEL F.	A00311	46.59 N	11.07 E	6 0 8	NE	NE	3150	2850	2560	1.46	2.3	B
374	SCHLADMINGER G.	A01103	47.28 N	13.38 E	6 4 6	NE	NE	2700	2600	2420	0.81	0.9	B
375	SCHLAPPEREBEN K	A00805	47.01 N	13.01 E	6 4 8	N	NE	3000	2780	2554	0.74	1.3	B
376	SCHLATEN K.	A00506	47.07 N	12.23 E	5 1 8	NE	NE	3670	2810	1940	11.27	6.3	B
377	SCHLEGEIS K.	A00405	46.59 N	11.46 E	6 0 4	NW	NW	3510	2700	2330	5.539	1.8	B
378	SCHMIEDINGER K.	A00726	47.11 N	12.41 E	6 0 6	NE	NE	3160	2750	2410	1.81	2	B
379	SCHNEEGLOCKEN	A00109	46.52 N	10.06 E	6 4 6	NE	NE	3020	2770	2570	0.72	1.2	B
380	SCHNEELOCH G.	A01104	47.30 N	13.36 E	6 4 8	NW	NW	2530	2300	2190	0.23	0.8	B
381	SCHWARZENBERG F	A00303	47.03 N	11.07 E	6 3 8	SE	SW	3490	3030	2590	1.84	2.9	B
382	SCHWARZENSTEIN	A00403	47.01 N	11.51 E	5 0 8	NW	NW	3320	2900	2300	4.837	2.8	B
383	SCHWARZKARL K.	A00716	47.10 N	12.40 E	6 4 6	NW	NW	2970	2750	2560	0.47	1.2	B
384	SCHWARZKOEPFL K	A00710	47.09 N	12.43 E	6 4 8	N	NW	2860	2570	2340	0.54	1.2	B
385	SEXEGERTEN F.	A00204	46.54 N	10.48 E	6 2 8	N	NE	3470	2950	2560	2.83	2.9	B
386	SIMMING F.	A00318	46.59 N	11.15 E	6 0 8	N	N	3170	2700	2340	2.52	2.3	B
387	SIMONY K.	A00511	47.04 N	12.16 E	6 0 9	SE	SE	3490	2810	2230	4.16	3.5	B
388	SONNBLICK K.	A0601A	47.08 N	12.36 E	6 0 6	NE	E	3050	2780	2500	1.5	1.5	B C
389	SPIEGEL F.	A00221	46.50 N	10.57 E	6 4 8	NW	NW	3430	3080	2780	1.11	1.7	B
390	SULZENAU F.	A0314A	46.59 N	11.09 E	5 1 8	N	N	3510	3060	2480	1.17	3.7	B
391	SULZTAL F.	A00301	47.00 N	11.05 E	5 2 8	N	N	3350	2860	2290	4.48	4.1	B
392	TASCHACH F.	A00205	46.54 N	10.52 E	5 2 8	N	NW	3760	3130	2240	8.16	5.6	B
393	TAUFKAR F.	A00216	46.53 N	10.54 E	6 4 6	SE	SE	3340	3120	2980	0.44	1	B
394	TEISCHNITZ K.	A00723	47.04 N	12.41 E	6 3 4	SW	SW	3660	3190	2760	2.07	2.5	B
395	TOTENFELD	A00110	46.53 N	10.09 E	6 4 8	NE	NE	3040	2790	2550	0.72	1.5	B
396	TRIEBENKARLAS F	A00323	46.57 N	11.09 E	6 4 8	W	W	3460	3040	2760	1.79	2	B
397	UEBERGOSS.ALM	A00901	47.26 N	13.04 E	7 0 6	N	NE	2900	2730	2500	2.44	1.5	B
398	UMBAL K.	A00512	47.03 N	12.15 E	5 3 8	SW	SW	3440	2850	2230	7.33	5	B
399	UNT. RIFFL KEES	A0713B	47.08 N	12.40 E	6 4 9	N	NW	2910	2530	2290	1.01	2	B
400	UNTERSULZBACH K	A00503	47.08 N	12.21 E	5 2 8	N	NW	3670	2720	2070	5.92	6.3	B
401	VD.KASTEN K.	A00719	47.06 N	12.39 E	6 7 4	SW	SW	3000	2790	2470	0.54	1.7	B
402	VERBORGENBERG F	A00322	47.04 N	11.07 E	6 4 6	E	E	3260	3000	2780	0.89	1.3	B
403	VERMUNTGL.	A00104	46.51 N	10.08 E	6 2 8	NW	NW	3130	2790	2430	2.24	2.8	B C
404	VERNAGT F.	A00211	46.53 N	10.49 E	6 2 6	S	SE	3630	3150	2720	9.18	3.3	B C F
405	VILTRAGEN K.	A00505	47.08 N	12.22 E	5 2 8	NE	E	3480	2660	2190	4.35	4.5	B
406	W.TRIPP K.	A01004	47.01 N	13.19 E	6 4 6	SE	S	3230	2880	2780	0.6	1.5	B
407	WASSERFALLWINKL	A00705	47.07 N	12.43 E	6 3 8	SE	S	3150	2870	2610	1.93	2.5	B
408	WAXEGG K.	A00401	47.00 N	11.48 E	6 3 6	NE	N	3380	2830	2290	4.084	2.4	B
409	WEISSEE F.	A00201	46.51 N	10.43 E	6 0 8	N	N	3530	2970	2540	3.48	3.4	B

NR	GLACIER NAME	PSFG NR	LAT	LONG	CODE	EXP AC	EXP AB	ELEVATION MAX	ELEVATION MED	ELEVATION MIN	AREA KM²	LEN KM	TYPE OF DATA
410	WIELINGER K.	A00725	47.09 N	12.45 E	6 0 4	N	NW	3560	2940	2180	0.98	2.4	B
411	WILDGERLOS	A00404	47.09 N	12.07 E	6 0 8	N	N	3260	2650	2110	3.68	2.8	B
412	WINKL K.	A01006	47.01 N	13.19 E	6 4 8	W	W	3100	2710	2390	0.66	1.5	B
413	WURFER K.	A00715	47.10 N	12.41 E	6 4 6	NW	NW	2820	2690	2580	0.35	0.6	B
414	WURTEN K.	A00804	47.02 N	13.00 E	6 2 8	SW	S	3120	2680	2380	1.09	3	B C
415	ZETTALUNITZ K.	A00508	47.05 N	12.23 E	6 3 8	SW	SW	3470	2980	2450	5.47	4.5	B
	ITALY												
416	AGNELLO	I00029	45.09 N	6.54 E	6 4 0	NE	NE	3200	3010	3020	0.5	1.45	B
417	ALTA (VEDRETTA)	I00730	46.27 N	10.41 E	5 3 8	NE	N	3350	3059	2680	1.75	2	B
418	AMOLA	I00644	46.13 N	10.40 E	6 3 0	E	E	3120	2785	2510	0.86	1.8	B
419	ANDOLLA NORD	I00336	46.05 N	8.02 E	6 4 0	SE	SE	3010	2860	2673	0.2	0.7	B
420	ANTELAO INF.	I00967	46.27 N	12.16 E	6 4 0	N	N	2800	2472	2340	0.2	0.85	B
421	ANTELAO SUP.	I00966	46.27 N	12.16 E	6 3 0	N	NE	3130	2465	2510	0.37	1.3	B
422	AURONA	I00338	46.15 N	8.05 E	5 2 0	NW	NE	3385	2940	2316	1.17	2.3	B
423	BARBADORSO D.	I00778	46.48 N	10.42 E	5 3 8	N	N	3550	2798	2595	1.84	2.1	B
424	BASEI	I00064	45.28 N	7.07 E	6 0 0	NE	NE	3320		2950	0.37	0.8	B
425	BELVEDERE	I00325	45.56 N	7.54 E	5 2 5	NE	NE	4520		1780	5.58	6.05	B
426	BESSANESE	I00040	45.18 N	7.07 E	5 3 2	SE	SE	3210		2580	1.04	2.55	B
427	BRENVA	I00219	45.50 N	6.54 E	5 2 8	SE	E	4810	3100	1400	8.06	7.64	B
428	CARESER	I00701	46.27 N	10.42 E	6 3 8	S	S	3350	3092	2857	3.857	2.2	C
429	CASPOGGIO	I00435	46.20 N	9.53 E	6 4 8	NW	NW	2985	2800	2630	0.84	1.1	B
430	CEVEDALE	I00732	46.27 N	10.38 E	5 3 8	E	E	3700	3078	2635	3.2	3.7	B
431	CHAVANNES	I00204	45.44 N	6.49 E	6 3 0	E	E	3090	2857	2700	1.09	1.5	B
432	CIARDONEY	I00081	45.31 N	7.26 E	6 4 0	N	N	3170	3000	2900	0.97	1.9	B C
433	COLLALTO	I00927	46.55 N	12.08 E	6 3 8	NW	NW	3380	2955	2515	2.57	2.1	B
434	CRISTALLO	I00937	46.35 N	12.12 E	6 0 0	N	N	3000	2510	2330	0.32	1.05	B
435	CRODA ROSSA	I00828	46.44 N	10.59 E	6 3 8	N	N	3205	3002	2718	0.21	1	B
436	DOSDE OR.	I00473	46.23 N	10.12 E	6 4 6	N	N	3200	2850	2525	0.85	1.7	B
437	DOSEGU	I00512	46.22 N	10.32 E	5 2 6	SW	SW	3670	3260	2780	3.3	2.8	B
438	FELLARIA OCC.	I00439	46.21 N	9.55 E	5 2 8	SE	SE	3700	3090	2530	5.09	3	B
439	FONTANA BIANCA	I00713	46.29 N	10.46 E	6 4 0	E	E	3355	3197	2880	0.66	1.1	C
440	FONTANA OCC.	I00780	46.48 N	10.10 E	6 3 6	N	N	3360	3022	2590	1.1	1.1	B
441	FORCOLA	I00731	46.27 N	10.39 E	5 3 8	E	NE	3750	3105	2640	2.52	3.5	B
442	FORNI	I00507	46.24 N	10.34 E	5 2 9	N	NW	3678	3150	2420	20	5	B
443	GIGANTE CENTR.	I00929	46.54 N	12.07 E	6 4 9	NW	N	3265	2816	2535	2.57	2.1	B
444	GIGANTE OCC.	I00930	46.54 N	12.06 E	6 3 6	N	N	3300	2955	2610	2.57	2.1	B
445	GOLETTA	I00148	45.30 N	7.03 E	5 2 0	N	N	3290	3055	2699	3.02	2.4	B
446	GRAN PILASTRO	I00893	46.58 N	11.44 E	5 3 8	SW	W	3370	2935	2460	2.62	3.7	B
447	HOSAND SETT.	I00357	46.24 N	8.18 E	6 2 0	NE	E	3180	2860	2550	1.98	2.87	B
448	LA MARE	I00699	46.26 N	10.36 E	5 2 5	E	E	3769	3260	2555	4.75	3.5	B
449	LANA	I00913	47.04 N	12.13 E	5 2 9	NW	NW	3480	2720	2240	1.69	2.9	B
450	LEX BLANCHE	I00209	45.47 N	6.49 E	5 1 0	SE	SE	3910	3120	2075	4.09	3.6	B
451	LUNGA(VEDRETTA)	I00733	46.28 N	10.37 E	5 2 9	NE	E	3450	3100	2660	2.62	3.6	B

NR	GLACIER NAME	PSFG NR	LAT	LONG	CODE	EXP AC	EXP AB	ELEVATION MAX	ELEVATION MED	ELEVATION MIN	AREA KM^2	LEN KM	TYPE OF DATA
452	LYS	I00304	45.54 N	7.50 E	5 1 5	SW	SW	4530	3732	2355	11.83	5.6	B
453	M. NEVOSO OCC.	I0931X	46.55 N	12.05 E	6 3 0	NW	NW	3310	2915	2620	0.54	1.3	B
454	MALAVALLE	I00875	46.57 N	11.12 E	5 1 5	E	E	3470	2950	2525	9.42	4.4	B
455	MANDRONE	I00639	46.10 N	10.32 E	5 2 0	NE	NE	3436	3022	2485	12.38	5.38	B
456	MARMOLADA	I00941	46.26 N	11.52 E	6 0 6	N	N	3340	2825	2490	2.6	1.5	B
457	MONCORVE	I00131	45.30 N	7.15 E	6 2 2	NW	NW	3642	3158	2895	2.23	1.5	B
458	MULINET NORD	I00048	45.22 N	7.13 E	6 4			2920		2660	0.18	0.5	F
459	NARDIS OCC.	I00640	46.12 N	10.39 E	5 3 0	SE	SE	3500	3160	2720	1.67	2.55	B
460	NEVES OR.	I00902	46.59 N	11.48 E	6 3 8	S	S	3300	2990	2550	2.27	2.2	B
461	NISCLI	I00633	46.07 N	10.36 E	6 3 0	E	E	3200	2783	2592	0.66	1.5	B
462	PENDENTE	I00876	46.58 N	11.14 E	5 2 0	S	S	3125	2818	2615	1.38	1.1	B
463	PIODE	I00312	45.54 N	7.52 E	5 2 0	SE	SE	4436	3120	2360	2.55	2.65	B
464	PISGANA OCC.	I00577	46.10 N	10.30 E	5 3 7	N	NE	3320	3000	2530	3.36	2.8	B
465	PIZZO SCALINO	I00443	46.17 N	9.59 E	6 3 6	N	N	3100	2920	2590	1.94	2.1	B
466	PRE DE BAR	I00235	45.54 N	7.03 E	5 2 0	SE	SE	3750	3095	2070	3.53	3.93	B
467	PRESANELLA	I00678	46.13 N	10.39 E	5 2 0	N	N	3525	2860	2455	3.92	3.2	B
468	QUAIRA BIANCA	I00889	46.58 N	11.41 E	5 2 0	SW	SW	3509	3132	2560	1.41	2.8	B
469	ROSIM	I00754	46.31 N	10.38 E	6 3 0	NW	W	3405	3215	2900	0.78	1.5	B
470	ROSSA (VEDR.)	I00697	46.24 N	10.38 E	6 3 0	NE	NE	3640	3195	2725	1.24	1.7	B
471	ROSSO DESTRO	I00920	47.02 N	12.12 E	5 3 6	W	W	3285	2838	2470	0.88	1.7	B
472	RUTOR	I00189	45.30 N	7.00 E	5 2 0	N	NW	3460	2998	2480	9.54	4.8	B
473	SASSOLUNGO OCC.	I00926	46.55 N	12.08 E	5 3 0	N	N	3210	2813	2530	1.92	2.1	B
474	SERANA (VEDR.)	I00728	46.28 N	10.42 E	6 4 6	N	N	3335	3085	2810	1.18	1.6	B
475	SFORZELLINA	I00516	46.20 N	10.30 E	6 4 8	NW	NW	3120	2925	2790	0.39	0.7	B C
476	SOLDA	I00762	46.29 N	10.35 E	5 2 7	NE	NE	3900	2908	2410	6.48	4.2	B
477	TESSA	I00829	46.44 N	10.59 E	6 3 2	N	NW	3300	2990	2695	0.8	1.8	B
478	TOULES	I00221	45.50 N	6.56 E	6 4 0	SE	SE	3500	3050	2620	0.93	1.65	B
479	TRAVIGNOLO	I00947	46.17 N	11.49 E	6 4 7	N	N	2850	2520	2260	0.28	0.9	B
480	TRESERO	I00511	46.23 N	10.32 E	6 4 6	NW	W	3470	3170	2970	0.77	1.1	B
481	TZA DE TZAN	I00259	45.59 N	7.34 E	5 2 0	SE	S	3810	3285	2530	3.95	3.7	B
482	ULTIMA (VEDR.)	I00729	46.27 N	10.42 E	6 4 8	N	N	3370	3115	2780	0.46	1.2	B
483	VALLE DEL VENTO	I00919	47.02 N	12.13 E	5 3 8	NW	NW	3050	2710	2460	0.36	1.2	B
484	VALLELUNGA	I00777	46.48 N	10.33 E	5 1 8	NW	NW	3730	3138	2410	8.55	3.9	B
485	VALTOURNENCHE	I00289	45.55 N	7.42 E	4 2 2	W	W	3695	3315	2990	1.68	2	B
486	VENEROCOLO	I00581	46.10 N	10.30 E	5 3 9	NW	N	3280	2810	2520	1.5	2.2	B
487	VENEZIA (VEDR.)	I00698	46.25 N	10.38 E	6 3 0	E	E	3705	3200	2775	1.71	2.5	B
488	VENTINA	I00416	46.16 N	9.46 E	5 3 6	NE	N	3500	2790	2183	2.37	3.7	B
489	VITELLI	I00483	46.30 N	10.26 E	5 3 7	W	NW	3467	3135	2485	1.82	2.9	B
490	ZAI DI DENTRO	I00749	46.33 N	10.38 E	6 5 0	NW	W	3314	3117	2960	0.45	1.1	B
491	ZAI DI MEZZO	I00750	46.33 N	10.38 E	6 0 0	NW	W	3520	3020	2870	0.72	1.4	B
	SPAIN												
492	MALADETA	E09020	42.39 N	0.38 E	6 4 8	NE	NE	3180	3025	2790	0.5	1.1	C

NR	GLACIER NAME	PSFG NR	LAT	LONG	CODE	EXP AC	EXP AB	ELEVATION MAX	ELEVATION MED	ELEVATION MIN	AREA KM²	LEN KM	TYPE OF DATA
	KENYA												
493	CESAR	KN00004	0.08 S	37.18 E	5 3 3	W	W	4780	4680	4580	0.024	0.3	B
494	DARWIN	KN00006	0.09 S	37.18 E	5 3 3	SW	SW	4740	4710	4640	0.023	0.2	B
495	DIAMOND	KN00010	0.09 S	37.18 E	6 3 0	S	S	5120	5070	4980	0.002	0.1	B
496	FOREL	KN00011	0.09 S	37.18 E	6 3 0	W	W	5000	4950	4820	0.1	0.15	B
497	GREGORY	KN00009	0.09 S	37.19 E	5 3 3	N	N	4890		4713	0.051	0.42	B
498	HEIM	KN00012	0.09 S	37.18 E	6 3 0	W	W	4800	4787	4720	0.016	0.08	B
499	JOSEPH	KN00003	0.08 S	37.18 E	5 3 3	W	W	4775	4790	4620	0.01	0.2	B
500	KRAPF	KN00001	0.09 S	37.18 E	5 3 3	N	N	4800	4750	4620	0.022	0.3	B
501	LEWIS	KN00008	0.09 S	37.18 E	5 3 3	SW	SW	4962		4611	0.242	0.95	B C
502	MELHUISH	KN00014	0.09 S	37.18 E		S	SE	4870	4720	4760	0.01	0.1	B
503	NORTHEY	KN00013	0.09 S	37.18 E	5 3 3	N	N	4930	4790	4680	0.011	0.15	B
504	TYNDALL	KN00005	0.09 S	37.18 E	5 3 3	S	S	4790		4513	0.078	0.5	B
	POLAND												
505	MIEGUSZOWIECKIE	PL00140	49.11 N	20.04 E	7 8 0	N	N	2080	2015	1960	0.012	0.15	B
506	POD BULA	PL00111	49.11 N	20.05 E	7 5 6	NW	NW	1710	1684	1646	0.004	0.1	B
507	POD CUBRYNA	PL00180	49.11 N	20.03 E	7 8 0	N	N	2190	2125	2088	0.011	0.15	B
	C.I.S.												
508	ABRAMOV	SU04101	39.38 N	71.36 E	5 2 8	N	N	4960	4200	3620	26.21	9.4	B C
509	ALIBEKSKIY	SU03002	43.10 N	41.30 E	5 3 8	NE	NE	3700		2000	5.4	4.6	B
510	BEZENGI	SU03006	43.10 N	43.00 E	5 2 9	NE	NE	5050		2080	36.2	17.6	B
511	BOLSHOY AZAU	SU03004	43.17 N	42.26 E	0 0 8	S	SE	5610	3900	2526	18.76	8.94	B
512	DJANKUAT	SU03010	43.12 N	42.46 E	5 2 8	N	NW	3990	3240	2700	3.113	4.2	B C D
513	DZHELO	SU07106	50.07 N	87.78 E	5 3 6	SE	SE	3780	3150	2590	8.66	5.53	B
514	GARABASHI	SU03031	43.18 N	42.28 E	0 0 8	SE	S	5000	3880	3316	4.47	5.8	B C
515	GOLUBIN	SU05060	42.28 N	74.30 E	5 3 8	NW	NW	4437	3970	3250	5.75	5.1	C
516	KARA-BATKAK	SU05080	42.06 N	78.18 E	5 3 8	N	N	4829	3886	3293	4.19	3.55	B C
517	KHAKEL	SU03003	43.10 N	41.40 E	5 3 9	N	N	3240		2270	2.7	3.9	B
518	KORUMDU	SU07103	50.08 N	87.41 E	5 3 6	NE	NE	4043	3150	2238	4.85	4.64	B
519	KOZELSKIY	SU08005	53.14 N	158.49 E	5 3 9	S	S	2030	1590	880	1.79	4.56	B C
520	LEVIY AKTRU	SU07102	50.05 N	87.43 E	5 3 6	SE	SE	4043	3250	2570	5.95	5.84	B C
521	LEVIY KARAGEMSK	SU07107	50.14 N	87.70 E	5 3 8	S	S	3760	3100	2290	4.04	3.4	B
522	MALIY AKTRU	SU07100	50.05 N	87.45 E	5 3 8	E	N	3714	3200	2229	2.73	4.22	B C
523	MALIY AZAU	SU03032	43.17 N	42.27 E	0 0 6	S	S	5610	4000	3077	8.47	7	B
524	MIZHIRGICHIRAN	SU03043	43.03 N	43.10 E	5 2 9	N	NW	4670		2380	9.9	8.8	B
525	MURAVLEV	SU06002	45.06 N	80.14 E	7 3 6	NW	NW	4040	3710	3160	1.4	2.05	B C D
526	NO. 122 (UNIV.)	SU07108	50.15 N	87.67 E	5 3 8	S	S	3850	3200	2680	2.4	3.68	B
527	NO.125 (VODOP.)	SU07105	50.06 N	87.42 E	3 0 3	N	N	3552	3230	3038	0.75	1.38	B C
528	NO.131	SU05081	41.51 N	77.46 E	5 3 8	NE	NE	4433	4151	3864	0.51	1.28	C
529	NO.462V(KUL.N.)	SU03005	43.05 N	42.55 E	5 3 9	NE	NE	4160		2500	4.1	3.7	B
530	PRAVIY KARAGEMS	SU07109	50.10 N	87.68 E	5 3 8	SE	SE	3960	3200	2390	2.03	3.6	B
531	SHUMSKIY	SU06001	45.05 N	80.14 E	5 3 6	N	N	4464	3660	3126	2.81	3.51	B C D

NR	GLACIER NAME	PSFG NR	LAT	LONG	CODE	EXP AC	EXP AB	ELEVATION MAX	ELEVATION MED	ELEVATION MIN	AREA KM²	LEN KM	TYPE OF DATA
532	SUYOK ZAPADNIY	SU05082	41.47 N	77.47 E	5 3 8	N	N	4496	4187	3895	1.25	2.5	C
533	TS.TUYUKSUYSKIY	SU05075	43.03 N	77.05 E	5 3 6	N	N	4219	3770	3414	2.72	3.1	B C D
534	TSEYA	SU03007	42.55 N	43.40 E	5 2 9	NE	NE	4460		2200	9.7	8.6	B
535	YUGO-VOSTOCHNIY	SU03018	42.17 N	46.16 E	5 4 7	NW	NW	3880	3480	3000	1.2	2.2	B
536	YUZHNIY	SU03017	42.17 N	46.15 E	6 4 9	N	N	3850	3400	2900	1.1	1.9	B
	<u>CHINA</u>												
537	URUMQIHE E-BR.	CN00010	43.05 N	86.49 E	6 2 2	NE	NE	4224		3736	1.163	2.2	C
538	URUMQIHE S.NO.1	CN00010	43.05 N	86.49 E	6 2 2	NE	NE	4486	4040	3736	1.84	2.2	B C
539	URUMQIHE W-BR.	CN00010	43.05 N	86.49 E	6 2 2	NE	NE	4476		3795	0.677	1.95	C
540	XIAO DONGKZMADI	CN00038	33.10 N	92.08 E	5 3 8	S	SW	5926		5380	1.767	2.8	C
	<u>PAKISTAN</u>												
541	ALING	PK00035	35.28 N	76.13 E	5 1 9	S	SE	7000	4900	3400	48	16	B F
542	BALTORO	PK00006	35.45 N	76.20 E	5 1 9	W	W	8611	6038	3530	1286	58.5	F
543	BUALTAR	PK00004	36.07 N	74.48 E	5 2 9	N	N	7275	4857	2439	84.53	20.5	B F
544	KARAMBAR	PK00028	36.48 N	74.10 E	5 1 9	W	W	6860	4200	2900	65	23	B F
545	PANMAH	PK00007	36.00 N	75.55 E	5 1 9	SE	S	6858	5029	3505	350	41.8	F
546	SARPO LAGGO	PK01002	35.50 N	76.18 E	5 1 9	N	NE	7260	5000				F
	<u>NEPAL</u>												
547	AX010	NP00005	27.42 N	86.34 E	6 3 6	E	SE	5360	5220	4952	0.568	1.7	B D
548	DX080	NP00007	27.57 N	86.40 E	6 4 6	N	N	5480	5280	5140	1.15	1.3	B
549	GYAJO	NP00011	27.53 N	86.41 E	6 3 6	NE	SE	5660	5430	5230	1.08	1.4	B
550	KONGMA	NP00010	27.56 N	86.50 E	6 5 6	S	S	5790	5590	5450	0.19	0.8	B
551	KONGMA TIKPE	NP00009	27.55 N	86.50 E	7 7 6	N	N	5500	5470	5440	0.02	0.2	B
552	RIKHA SAMBA	NP00012	28.50 N	83.30 E	5 3 8	S	SE	5990	5650	5250	4.8	6.2	B
553	THULAGI	NP00013	28.29 N	84.30 E	5 1 9	SW	W	6500	5000	4050		9	B F
554	YALA	NP00004	28.15 N	85.37 E	6 3 6	SW	SW	5749	5400	5090	2.57	1.5	B
	<u>JAPAN</u>												
555	HAMAGURI YUKI	J00001	36.36 N	137.37 E	7 3 0	NE	NE	2720		2690	0.003	0.07	C
	<u>NEW ZEALAND</u>												
556	ABEL	NZ893A3	43.19 S	170.38 E	4 7 8	S	S	2345	1780	1220	3.45	1.95	B
557	ADAMS	NZ08974	43.19 S	170.43 E	5 1 8	W	N	2470	1880	1295	9.96	6.6	B
558	ALMER	NZ888B1	43.28 S	170.13 E	5 1 8	W	SW	2390	1950	1385	3.1	3.2	B
559	ANDY	NZ863C1	44.26 S	168.22 E	4 1 8	N	N	2190	1750	840	10.49	7.1	B
560	ASHBURTON	NZ688A1	43.22 S	170.58 E	5 3 9	S	S	2590	2085	1575	1.69	2.5	B
561	BALFOUR	NZ882B1	43.33 S	170.07 E	5 3 9	W	W	3305	1525	730	7	9.9	B F
562	BARLOW	NZ893A2	43.18 S	170.38 E	6 2 9	W	W	2440	1705	1220	2.57	3.8	B
563	BLAIR	NZ711D1	43.57 S	169.43 E	6 7 8	SE	SE	2105	1980	1830	0.38	0.5	B
564	BONAR	NZ863A1	44.24 S	168.43 E	6 2 4	SW	W	3025	2090	1160	15.41	7.9	B
565	BREWSTER	NZ868C1	44.04 S	169.26 E	6 3 8	SW	SW	2390	1920	1705	2.73	2.75	B

NR	GLACIER NAME	PSFG NR	LAT	LONG	CODE	EXP AC	EXP AB	ELEVATION MAX	ELEVATION MED	ELEVATION MIN	AREA KM²	LEN KM	TYPE OF DATA	
566	BURTON	NZ888A1	43.27 S	170.19 E	5 2 9	N	NW	3115	2120	1130	6.74	6.35	B	
567	CAMERON	NZ685B2	43.20 S	171.00 E	6 2 9	SW	SE	2470	1980	1380	1.97	3.1	B	
568	CLASSEN	NZ711M1	43.30 S	170.25 E	5 3 4	SE	SE	2560	1780	1005	10.32	8.25	B	
569	COLIN CAMPBELL	NZ693C1	43.19 S	170.43 E	5 3 9	S	E	2500	1815	1130	3.94	3.65	B	
570	CROW	NZ664C2	42.55 S	171.30 E	6 3 6	SE	S	2210	1940	1675	0.47	1.2	B	
571	DART	NZ752C2	44.27 S	168.36 E	5 3 9	SW	SW	2470	1770	1070	9.85	7.6	B	
572	DONNE	NZ851B2	44.35 S	168.01 E	6 3 8	E	SE	2745	1615	1220	3.52	3.6	B	
573	DOUGLAS (KAR.)	NZ880B2	43.41 S	170.00 E	5 2 4	SW	W	3160	1980	960	11.76	7.4	B	
574	DOUGLAS (RAK.)	NZ685B1	43.22 S	170.59 E	6 7 8	E	E	2350	2135	1860	0.31	0.9	B	
575	EVANS	NZ8972	43.12 S	170.55 E	5 2 9	SW	W	2455	1860	1250	2.79	2.9	B	
576	FITZGERALD	NZ880B3	43.43 S	170.01 E	5 3 9	W	W	2375	2010	1645	0.36	1.05	B	
577	FOX	NZ882A1	43.32 S	170.09 E	5 2 8	NW	W	3500	1900	305	34.69	13.2	B	
578	FRANZ JOSEF	NZ888B2	43.30 S	170.13 E	5 2 8	NW	NW	2955	1690	425	32.59	10.25	B	
579	GLENMARY	NZ711F1	44.00 S	169.53 E	6 4 8	S	S	2315	2165	1950	0.69	1.45	B	
580	GODLEY	NZ711M3	43.26 S	170.34 E	5 2 4	S	SW	2440	1785	1130	15.85	8.6	B	
581	GREY AND MAUD	NZ711M2	43.27 S	170.29 E	5 1 4	SW	S	2440	1750	1065	10.87	7.2	B	F
582	HOOKER	NZ711H2	43.36 S	170.07 E	5 3 4	W	S	3765	2320	870	16.54	13.1	B	
583	HORACE WALKER	NZ880B1	43.40 S	169.58 E	5 3 8	W	SW	2455	2075	945	5.99	6.6	B	
584	IVORY	NZ09011	43.08 S	170.55 E	6 4 4	S	S	1730	1510	1390	0.93	1.35	B	
585	JACK	NZ08751	43.49 S	169.38 E	6 4 6	W	W	2040	1935	1860	0.14	0.25	B	
586	JACKSON	NZ868B5	43.53 S	169.47 E	6 2 6	NW	NW	2285	2040	1585	0.66	0.9	B	
587	JALF	NZ08861	43.28 S	170.09 E	2 3 8	NW	W	1830	1720	1525	0.54	1	B	
588	KAHUTEA	NZ685E1	43.01 S	171.23 E	6 3 8	S	SW	2300	2025	1740	0.75	1.6	B	
589	KEA	NZ08971	43.11 S	170.48 E	6 4 8	S	S	1980	1830	1645	0.98	0.7	B	
590	LA PEROUSE	NZ882B2	43.34 S	170.07 E	5 3 9	NW	W	3320	1980	855	9.5	11.15	B	
591	LAMBERT	NZ08973	43.18 S	170.45 E	2 2 4	E	NW	2425	1810	1190	9.32	5.15	B	
592	LE BLANC	NZ868B3	43.47 S	169.58 E	5 3 9	N	W	2470	1800	1130	1.66	3.6	B	
593	LINDSAY	NZ08671	43.60 S	169.08 E	6 7 6	NW	NW	1785	1770	1735	0.02	0.05	B	
594	LYELL	NZ685C2	43.17 S	170.50 E	5 2 9	S	E	2440	1720	1005	10.79	6.2	B	
595	MARCHANT	NZ880A1	43.37 S	170.02 E	5 3 9	SW	W	2255	1660	1065	1.19	2.95	B	
596	MARION	NZ863B4	44.28 S	168.29 E	6 2 8	W	N	2470	1905	1340	7.03	5.1	B	
597	MARMADUKE DIXON	NZ664C1	42.59 S	171.23 E	6 4 8	E	SE	2130	1870	1615	0.77	1.7	B	F
598	MC COY	NZ693C2	43.19 S	170.48 E	5 3 9	SW	SE	2135	1800	1250	1.05	2.6	B	
599	MUELLER	NZ711H1	43.45 S	170.01 E	5 2 4	SE	SE	2895	1330	760	18.54	13.65	B	
600	MURCHISON	NZ711J1	43.31 S	170.24 E	5 2 9	E	SW	3155	2080	1005	36.57	16.45	B	
601	PARK PASS 1	NZ752B1	44.35 S	168.14 E	6 3 8	S	S	2210	1890	1570	3.02	2.55	B	
602	POET	NZ868B2	43.45 S	169.58 E	6 3 9	W	SW	2680	1980	1250	0.61	2.35	B	
603	RAMSAY	NZ685C3	43.13 S	170.56 E	5 3 4	SW	S	2315	1650	990	9.2	8.6	B	
604	REISCHEK	NZ685C1	43.19 S	171.00 E	6 3 8	SW	SW	2440	2075	1615	1.72	2.65	B	
605	RETREAT	NZ906A1	42.58 S	171.18 E	6 4 9	SW	SW	1950	1770	1585	0.3	0.7	B	
606	RICHARDSON	NZ711E1	43.48 S	169.57 E	5 3 9	W	SW	2225	1525	1080	3.86	5.8	B	
607	RIDGE	NZ711L1	43.37 S	170.22 E	6 4 6	S	S	2485	2255	2075	0.84	0.95	B	
608	ROLLESTON	NZ911A2	42.53 S	171.31 E	6 4 6	SE	SE	1890	1770	1650	0.23	0.5	B	
609	SALE	NZ906B1	43.13 S	170.57 E	6 3 8	E	SE	2134	1753	1372	0.95	1.8	B	

NR	GLACIER NAME	PSFG NR	LAT	LONG	CODE	EXP AC	EXP AB	ELEVATION MAX	ELEVATION MED	ELEVATION MIN	AREA KM²	LEN KM	TYPE OF DATA
610	SIEGE	NZ893A1	43.16 S	170.32 E	5 3 8	SE	SE	2120	1705	1435	1.19	3.05	B
611	SINCLAIR	NZ693C3	43.22 S	170.52 E	5 3 8	SW	SW	2285	1830	1600	0.47	1.35	B
612	SNOW WHITE	NZ863B2	44.27 S	168.35 E	5 3 8	N	E	2425	1950	1220	5.54	5.5	B
613	SNOWBALL	NZ863B3	44.27 S	168.31 E	6 3 8	NW	W	2345	1905	1465	3.31	2.7	B
614	SPENCER	NZ888A2	43.30 S	170.17 E	5 2 9	W	N	3045	1900	760	10.07	7.75	B
615	STRAUCHON	NZ880A2	43.37 S	170.05 E	5 3 4	W	SW	2530	1745	960	3.62	5.8	B
616	TASMAN	NZ711I1	43.31 S	170.19 E	5 2 4	S	S	3690	2210	730	98.34	28.5	B F
617	THERMA	NZ08641	44.22 S	168.46 E	2 2 0	S	NE	2910	1830	790	26.38	10.65	B
618	THURNEYSON	NZ711B1	44.10 S	169.36 E	6 2 6	S	S	2425	2010	1355	1.79	1.15	B
619	TORNADO	NZ863C2	44.22 S	168.25 E	6 3 4	S	E	1720	1370	1020	1.68	2.2	B
620	UNNAMED NZ664C	NZ664C1	42.55 S	171.29 E	6 4 8	S	S	1830	1723	1615	0.12	0.4	B
621	UNNAMED NZ685C	NZ685C4	43.15 S	170.56 E	6 2 6	E	SE	2010	1860	1675	0.76	0.6	B
622	UNNAMED NZ685F	NZ685F1	43.03 S	171.24 E	6 7 6	E	E	2100	1965	1860	0.12	0.4	B
623	UNNAMED NZ752E	NZ752E1	44.31 S	168.48 E	6 4 6	SE	S	2135	2040	1920	0.28	0.6	B
624	UNNAMED NZ752I	NZ752I1	44.07 S	169.16 E	6 4 6	SE	SE	1830	1675	1410	0.67	0.95	B
625	UNNAMED NZ797G	NZ797G1	44.50 S	167.46 E	6 7 6	E	E	1770	1645	1400	0.03	0.55	B
626	UNNAMED NZ846	NZ08461	44.39 S	167.48 E	6 5 8	SW	S	1645	1465	1370	0.12	0.65	B
627	UNNAMED NZ851B	NZ851B1	44.46 S	168.05 E	6 4 4	SE	E	1860	1615	1495	0.77	1.25	B
628	UNNAMED NZ863B	NZ863B1	44.23 S	168.31 E	6 4 8	SE	SE	1525	1435	1400	0.3	0.16	B
629	UNNAMED NZ868B	NZ868B4	43.50 S	169.53 E	6 3 9	N	W	2105	1705	1615	0.54	1.8	B
630	UNNAMED NZ911A	NZ911A1	42.52 S	171.40 E	6 4 8	E	E	2010	1905	1800	0.07	0.3	B
631	VICTORIA	NZ882A1	43.30 S	170.10 E	5 3 9	W	W	2560	1890	1065	4.5	6.5	B
632	WHITBOURNE	NZ752C1	44.28 S	168.34 E	5 3 9	W	S	2575	1830	1080	9.47	6.7	B
633	WHITE	NZ664C1	43.00 S	171.23 E	6 3 8	NE	NE	2320	2015	1710	0.6	1.8	B
634	WHYMPER	NZ893B1	43.29 S	170.22 E	5 3 9	NW	NE	2775	1780	790	6.55	7.2	B
635	WIGLEY	NZ873B2	43.25 S	170.21 E	6 9 0	NE	N	2195	1770	1400	1.93	2.8	B
636	WILKINSON	NZ906B2	43.12 S	170.56 E	6 2 4	NE	NE	2286	1615	945	3.95	3.8	B
637	ZORA	NZ868B1	43.45 S	169.50 E	6 2 8	S	S	2455	1920	1095	4.44	3.25	B
	ANTARCTICA												
638	BARTLEY	AN00016	77.31 S	162.14 E	5 3 4	N	N	2000	1350	220		12.5	B
639	CLARK CPI	AN00012	77.25 S	162.20 E	6 4 2	N	E	1790	850	460		10.5	B
640	HART	AN00019	77.30 S	162.21 E	5 3 4	NW	NW	1700	1035	370		5.7	B
641	HEIMDALL	AN00003	77.35 S	162.52 E	5 3 8	W	NW	1800	1500	1200	7.96	6	B
642	MESERVE MPII	AN00017	77.33 S	162.22 E	5 3 4	N	NW	1750	1300	340	9.9	7.2	B
643	VICTORIA UPPER	AN00013	77.16 S	161.30 E	5 2 4	NE	SE	2200	1200	450		18	B
644	WRIGHT LOWER	AN00018	77.25 S	162.50 E	2 0 3	NE	W			275			B
645	WRIGHT UPPER B	AN00011	77.33 S	166.30 E	4 0 3	E	E	2400		850			B

Notes

Notes

WORLD GLACIER MONITORING SERVICE

VARIATIONS IN THE POSITION OF GLACIER FRONTS 1990-95

TABLE B

NR	Record number
GLACIER NAME	15 alphabetic or numeric digits
PSFG NUMBER	5 digits identifying glacier with alphabetic prefix denoting country
METHOD	a = aerial photogrammetry b = terrestrial photogrammetry c = geodetic ground survey (theodolite, tape etc.) d = combination of a, b or c e = other methods or no information
1ST SURVEY	Year when glacier was first surveyed
LAST SURVEY	Last survey before reported period
VARIATION IN METERS	Variation in the position of the glacier front in horizontal projection expressed as the change in length between the surveys

Key to Symbols

- +X : Glacier in advance
- - X : Glacier in retreat
- ST : Glacier stationary
- SN : Glacier front covered by snow

NR	GLACIER NAME	PSFG NR	FIRST	LAST	METHOD	VARIATIONS IN METERS				
			SURVEY			1991	1992	1993	1994	1995
	CANADA									
1	OVERLORD	CD01590	1928	1990	C		- 27.3	0.8		- 50.0
2	WEDGEMOUNT	CD02333	1928	1990	A				- 39.0	- 14.5
	U.S.A.									
3	BLUE GLACIER	US02126	1938	1990	C	- 14.0	- 42.0	- 6.0	- 25.0	8.0
4	CANTWELL	US00320	1950	1950	C			- 98.0		
5	MCCALL	US00001	1957	1971	C			- 285.0	- 5.4	- 19.0
6	MIDDLE TOKLAT	US00315	1954	1954	C		- 769.0			
7	SOUTH CASCADE	US02013	1957	1990	A	- 30.0	- 38.0	- 22.0	- 29.0	- 23.0
	COLOMBIA									
8	NEREIDAS	CO00014	1958	1990	C	- 50.0	- 80.0	- X	- X	- 260.0
	PERU									
9	BROGGI	PE00003	1968	1990	C	- 36.7	- 54.5	- 22.2	- 7.8	- 17.4
10	URUASHRAJU	PE00005	1968	1990	C	- 25.8	- 32.7	- 24.2	- 24.1	- 34.7
11	YANAMAREY	PE00004	1972	1990	C	- 7.2	- 4.0	- 22.0	- 21.7	- 35.8
	BOLIVIA									
12	CHACALTAYA	RB05180		1991	C		- 5.2	- 4.7	- 4.6	- 17.6
13	ZONGO	RB05150		1991	C		- 12.3	1.1	- 10.2	- 6.4
	CHILE									
14	BERNARDO	RC00037	1945	1984	A		226.0			
15	GREY	RC00062	1945	1975	A	- 352.0				- 80.0
16	PIO XI	RC00044	1925	1986	A		500.0	400.0	700.0	- 600.0
	ICELAND									
17	BREIDAMJOK.E.A	IS1126A	1932	1990	C	- X				
18	BREIDAMJOK.E.B	IS1126B	1932	1990	C	- 40.0	- 24.0	- 25.0		
19	BREIDAMJOK.W.A	IS1125A	1932	1990	C	- 62.0	- 57.0	- 40.0	- 18.0	0.0
20	BREIDAMJOK.W.C	IS1125C	1932	1990	C	- 70.0	- 69.0	- 16.0	- 20.0	- 30.0
21	BROKARJOKULL	IS01427		1990	C	- 12.0		- 18.0	11.0	
22	FALLJOKULL	IS01021	1932	1990	C	- 3.0	- 14.0	- 3.0	- 14.0	- 1.0
23	FJALLS.FITJAR	IS1024B	1948	1990	C	- 9.0	- 39.0	- 67.0	10.0	5.0
24	FJALLSJ. BRMFJ	IS1024A	1948	1987	C	- 21.0	- 22.0	- 15.0	- 20.0	- 5.0
25	FJALLSJ.G-SEL	IS1024C	1948	1990	C	- 25.0	- 25.0	- 30.0	- X	25.0
26	FLAAJOKULL	IS1930A		1972	C	5.0	6.0	- 7.0	- 5.0	
27	GIGJOKULL	IS00112	1930	1990	C			7.0	22.0	
28	GLJUFURARJOKULL	IS00103	1939	1989	C				- X	- 4.0
29	HAGAFELLSJOK.E	IS00306	1934	1990	C			- 149.0		
30	HAGAFELLSJOK.W	IS00204	1934	1990	C			- 86.0		
31	HALSJOKULL	IS00117	1972	1990	C	3.0	5.0	SN		

NR	GLACIER NAME	PSFG NR	FIRST SURVEY	LAST SURVEY	METHOD	VARIATIONS IN METERS 1991	1992	1993	1994	1995
32	HOFFELLSJ.W	IS02031	1930	1990	C		- 2.0			
33	HRUTARJOKULL	IS00923	1948	1990	C	- 5.0	- X	- X	- 28.0	5.0
34	HYRNINGSJOKULL	IS00100	1931	1990	C	2.0	9.0	20.0	16.0	28.0
35	JOKULKROKUR	IS00007	1965	1985	C	3.0				
36	KALDALONSJOKULL	IS00102	1931	1988	C	SN	- 4.0	- 6.0	- 3.0	12.0
37	KVERKJOKULL	IS02500	1963	1989	C			13.0		
38	KVIARJOKULL	IS00822	1934	1990	C	- 14.0	- X	- X	- 11.0	6.0
39	LEIRUFJ.JOKULL	IS00200	1966	1990	C	- 22.0	0.0	- 37.0	- 32.0	39.0
40	MORSARJOKULL	IS00318	1932	1990	C	- 3.0	- 52.0	31.0	0.0	0.0
41	MULAJOKULL S.	IS0311A	1933	1990	C	- 91.0	49.0	153.0	- 15.0	- 52.0
42	NAUTHAGAJOKULL	IS00210	1932	1990	C	- 8.0	1.0	3.0	- 9.0	- 2.0
43	OLDUFELLSJOKULL	IS00114	1967	1989	C			57.0		
44	REYKJAFJARDARJ.	IS00300	1931	1990	C	- 47.0	- 10.0	SN	- 25.0	- 8.0
45	SATUJOKULL	IS00530		1990	C	- 11.0	- 8.0	0.0	- X	
46	SIDUJOK.E M177	IS0015B	1964	1990	C	- 95.0	- 27.0	- 63.0	1117.0	- 3.0
47	SKAFTAFELLSJ.	IS00419	1932	1990	C	- 12.0	0.0	- 6.0	- 46.0	- 56.0
48	SKALAFELLSJOKUL	IS1728A		1990	C		2.0	5.0		2.0
49	SKEIDARARJ. E1	IS0117A	1932	1990	C	147.0	- 28.0	- 9.0	- 33.0	- 31.0
50	SKEIDARARJ. E2	IS0117B	1932	1990	C	64.0	- 10.0	- 16.0	- 11.0	- 7.0
51	SKEIDARARJ. E3	IS0117C	1932	1990	C	0.0	- 3.0	- 1.0	- 4.0	- 3.0
52	SKEIDARARJ. W	IS00116	1932	1990	C	429.0	86.0	- X	- X	- 77.0
53	SOLHEIMAJOK. W	IS0113A	1930	1990	C	2.0	13.0	12.0	- 3.0	13.0
54	SVINAFELLSJ.	IS0520A	1932	1990	C	11.0	7.0	- 11.0	- 7.0	5.0
55	TUNGNAARJOKULL	IS02214	1955	1990	C	- 81.0	- 9.0	- 31.0	- 17.0	1175.0
56	VIRKISJOKULL	IS00721	1932	1990	C	- X	- X	- X	- 22.0	- X
	<u>NORWAY</u>									
57	AUSTERDALSBREEN	N31220	1906	1990	C	0.0	5.0	7.0	15.0	15.0
58	BRIGSDALSBREEN	N37110	1901	1990	C	10.0	35.0	75.0	80.0	65.0
59	ENGABREEN	N67011	1903	1990	C	- 24.0		18.0		115.0
60	FAABERGSTOELSB.	N31015	1907	1990	C	- 18.0	- 6.0	10.0	34.0	44.0
61	HANSBREEN	N12419	1936	1990	B	- 309.0	56.0	- 64.0	45.0	42.0
62	HELLSTUGUBREEN	N00511	1902	1990	C	- 7.0	- 9.0	- 3.0	- 9.0	- 6.0
63	LEIRBREEN	N00548	1910	1990	C			- 16.5		- 14.5
64	NIGARDSBREEN	N31014	1907	1990	C	10.0	21.0	14.0	36.0	50.0
65	STEGHOLTBREEN	N31021	1907	1990	C	- 7.0	- 5.0	- 3.0	- 10.0	- 5.0
66	STORBREEN	N00541	1904	1990	C				- 1.5	0.0
67	STYGGEDALSBREEN	N30720	1903	1992	C			0.0	4.0	2.0
	<u>SWEDEN</u>									
68	HYLLGLACIAEREN	S00780	1965	1990	C	0.0	0.0	0.0	- 4.0	0.0
69	ISFALLSGLAC.	S00787	1897	1990	C	0.0	5.0	3.0	2.0	5.0
70	KARSOJIETNA	S00798	1905	1990	C		0.0	0.0	- 2.0	
71	MIKKAJEKNA	S00766	1896	1990	C	- 8.0	- 10.0	- 15.0	- 12.5	- 13.5

NR	GLACIER NAME	PSFG NR	FIRST SURVEY	LAST SURVEY	METHOD	VARIATIONS IN METERS 1991	1992	1993	1994	1995
72	PARTEJEKNA	S00763	1965	1990	C	0.0	- 4.0	- 5.0	- 12.0	- 9.0
73	PASSUSJIETNA E.	S00797	1968	1990	C		0.0	0.0		
74	PASSUSJIETNA W	S00796	1968	1990	C		- 2.0	- 4.0	- 2.0	0.0
75	RABOTS GLACIAER	S00785	1946	1990	C	- 11.0	- 14.0	- 15.0		- 18.6
76	RIUKOJIETNA	S00790	1963	1990	C		0.0	0.0	0.0	0.0
77	RUOPSOKJEKNA	S00764	1965	1989	C		- 10.0	- 11.0	- 3.9	- 3.4
78	RUOTESJEKNA	S00767	1965	1990	C	- 14.0	- 7.0	- 4.0	- 10.0	
79	SALAJEKNA	S00759	1897	1990	C		- 10.0		- 14.0	- 12.5
80	SE KASKASATJ GL	S00789	1910	1989	C	0.0	3.0	1.0	2.0	5.0
81	STORGLACIAEREN	S00788	1897	1990	C	0.0	0.0	0.0	0.0	0.0
82	STOUR RAEITAGL.	S00784	1963	1990	C		0.0	- 5.0	- 3.0	- 1.0
83	SUOTTASJEKNA	S00768	1964	1990	C	- 2.0	0.0	0.0	0.0	0.0
84	UNNA RAEITA GL.	S00783	1963	1990	C		0.0	0.0	0.0	0.0
85	VARTASJEKNA	S00765	1964	1990	C	0.0	0.0	0.0	0.0	0.0
	FRANCE									
86	ARGENTIERE	F00002	1878	1990	C	- 11.0	- 13.0	- 25.0	- 10.0	- 22.0
87	BLANC	F00031	1871	1990	C	- 15.5	- 18.0	- 26.0	- 27.0	- 23.5
88	BOSSONS	F00004	1861	1990	C	- 110.0	- 66.0	- 81.0	- 74.0	- 18.0
89	GEBROULAZ	F00009	1730	1990	C	- 6.0	- 21.0	ST	ST	ST
90	MER DE GLACE	F00003	1879	1990	C	5.0	ST	ST	ST	ST
91	SAINT SORLIN	F00015	1904	1990	C	- 2.7	- 6.2	- 1.8	2.6	- 3.4
	SWITZERLAND									
92	ALLALIN	CH00011	1880	1990	A	- 35.0	- 63.0	- 20.0	- 11.0	- 24.0
93	ALPETLI(KANDER)	CH00109	1893	1990	C	- 2.0	- 9.0	- 6.0	- 3.0	- 3.0
94	AMMERTEN	CH00111	1969	1990	C	- 6.0	- 4.0	- 1.0	- 4.0	- 2.0
95	AROLLA (BAS)	CH00027	1884	1990	C	- 26.0	- 10.0	- 15.0	- 6.0	- 11.0
96	BASODINO	CH00104	1893	1990	C	- 2.0	- 3.0	+ X	6.0	- 25.0
97	BELLA TOLA	CH00021	1945	1990	C	- 13.0	- 1.0	- 5.0	- 9.0	- 39.0
98	BIFERTEN	CH00077	1893	1990	C	- 4.0			- 39.0	- 7.0
99	BIS	CH00107	1883	1990	E	- X	- X		- X	- X
100	BLUEMLISALP	CH00064	1893	1990	C	- 11.0	- 6.0	- 17.0	- 7.0	- 3.0
101	BOVEYRE	CH00041	1889	1990	C	- 25.0	- 37.0		- 13.0	
102	BRENEY	CH00036	1892	1990	C	- 11.0	- 24.0	- 27.0	- 8.0	- 2.0
103	BRESCIANA	CH00103	1896	1990	C	- 12.0	SN	- 17.0	- 8.0	- 14.0
104	BRUNEGG	CH00020	1941	1990	C	- 5.0	- 3.0	- 4.0	- 8.0	- 5.0
105	BRUNNI	CH00072	1882	1990	C				- X	
106	CALDERAS	CH00095	1920	1990	C	- 17.0	- 9.0	- 8.0	- 4.0	- 7.0
107	CAMBRENA	CH00099	1889	1990	C	- 5.0	- 12.0	- X	- 17.0	- 9.0
108	CAVAGNOLI	CH00119	1893	1990	C	- 16.0	- 21.0	- X	- 12.0	0.0
109	CHEILLON	CH00029	1919	1990	C	- 79.0	- 60.0		11.0	- 7.0
110	CORBASSIERE	CH00038	1889	1990	C	- 15.0	- 14.0	9.0		
111	CORNO	CH00120	1893	1990	C	- 7.0	- 13.0	- X	- 16.0	1.0

NR	GLACIER NAME	PSFG NR	FIRST SURVEY	LAST SURVEY	METHOD	VARIATIONS IN METERS 1991	1992	1993	1994	1995
112	DAMMA	CH00070	1920	1990	C	2.0	- 9.0	- X	- 9.0	- 16.0
113	EIGER	CH00059	1893	1990	C	- 28.0	- 16.0	- 17.0	- 13.0	- 8.0
114	EN DARREY	CH00030	1929	1990	C		- 8.0		- 65.0	- 2.0
115	FEE NORTH	CH00013	1879	1990	C	- 10.0	- 5.0		- 55.0	- 38.0
116	FERPECLE	CH00025	1891	1990	C	- 19.0	- 8.0	- 7.0	- 23.0	- 12.0
117	FIESCHER	CH00004	1891	1990	C	- 6.0	7.0	- 16.0	- 21.0	- 16.0
118	FINDELEN	CH00016	1892	1990	D	- 61.0	- 22.0		- 32.0	- 35.0
119	FIRNALPELI	CH00075	1894	1990	C		- 15.0	- X	- 8.0	- 5.0
120	FORNO	CH00102	1894	1990	C	- 19.0	- 22.0	- 16.0	- 24.0	- 21.0
121	GAMCHI	CH00061	1893	1990	C	- 3.0	- 6.0	- 12.0	- 9.0	- 1.0
122	GAULI	CH00052	1886	1990	C	- 11.0	- 21.0	- 9.0	- 30.0	- 12.0
123	GIETRO	CH00037	1889	1990	A	- X	- X	- X	- X	- X
124	GLAERNISCH	CH00080	1923	1990	C	- 5.0		- 22.0	- 9.0	- 35.0
125	GORNER	CH00014	1883	1990	C	- 4.0	- 52.0	- 12.0	- 34.0	- 10.0
126	GRAND DESERT	CH00031	1892	1989	C	- 73.0	- 7.0		- 11.0	- 4.0
127	GRAND PLAN NEVE	CH00045	1893	1990	C	- 10.0	0.0		4.0	6.0
128	GRIES (AEGINA)	CH00003	1961	1990	A	- 9.0	- 18.0	- X	- 17.0	- 11.0
129	GRIESS(KLAUSEN)	CH00074	1929	1990	C	- 34.0	- 2.0		- 18.0	0.0
130	GRIESSEN(OBWA.)	CH00076	1894	1990	C		- 9.0	- 2.0	- 5.0	ST
131	GROSSER ALETSCH	CH00005	1886	1990	A	- 9.0	- 18.0	- 26.0	- 37.0	- 60.0
132	HUEFI	CH00073	1882	1990	C		- 26.0		- 33.0	- 33.0
133	KALTWASSER	CH00007	1891	1990	C	4.0	1.0	- X	- 8.0	- 4.0
134	KEHLEN	CH00068	1893	1990	C	- 14.0	- 12.0	- X	- 41.0	- 29.0
135	KESSJEN	CH00012	1928	1990	A	- 28.0	12.0			+ X
136	LAEMMERN	CH00063	1917	1990	C	- 10.0	- 8.0	- 6.0	- 6.0	- 5.0
137	LANG	CH00018	1888	1990	C	- 7.0	- 3.0	- 7.0	- 1.0	- 8.0
138	LAVAZ	CH00082	1899	1989	C			- 386.0		+ X
139	LENTA	CH00084	1895	1990	C		- 92.0		- 11.0	- 11.0
140	LIMMERN	CH00078	1964	1990	C	- 5.0	- 2.0		- 6.0	- 2.0
141	LISCHANA	CH00098	1895	1990	C	- 5.0	- 7.0	- 2.0	- 5.0	- 6.0
142	MARTINETS	CH00046	1894	1986	E		- X			
143	MITTELALETSCH	CH00106	1970	1990	C	- 16.0	- 8.0	- X	- X	- X
144	MOIRY	CH00024	1891	1990	C	- 6.0	- 4.0	- 2.0	- 1.0	0.0
145	MOMING	CH00023	1911	1990	C	- 10.0	- 30.0	- 81.0	- 32.0	- 16.0
146	MONT DURAND	CH00035	1885	1990	C	23.0	6.0	20.0	8.0	8.0
147	MONT FORT	CH00032	1892	1988	C	- 221.0	- 8.0		5.0	23.0
148	MONT MINE	CH00026	1956	1990	C	- 25.0	- 5.0	- 7.0	- 58.0	- 18.0
149	MORTERATSCH	CH00094	1879	1990	C	- 5.0	- 6.0	-24.0	- 12.0	- 24.0
150	MUTT	CH00002	1918	1990	D	- 5.0	- 7.0	- X	0.0	
151	OB.GRINDELWALD	CH00057	1880	1990	C	- 53.0	- 50.0	- 60.0	- 62.0	- 7.0
152	OBERAAR	CH00050	1920	1990	A	- 4.0	- 18.0	- 3.0	- 20.0	- 10.0
153	OFENTAL	CH00009	1922	1990	D		- 42.0			+ X
154	OTEMMA	CH00034	1887	1990	C	- 13.0	- 13.0	- 40.0	- 32.0	- 13.0
155	PALUE	CH00100	1894	1990	C	- 12.0	- 7.0	- 7.0	- 9.0	- 8.0

NR	GLACIER NAME	PSFG NR	FIRST	LAST	METHOD	VARIATIONS IN METERS				
			SURVEY			1991	1992	1993	1994	1995
156	PANEYROSSE	CH00044	1893	1990	C	- 7.0	0.0		- 4.0	6.0
157	PARADIES	CH00086	1898	1990	C	- 21.0	- 81.0	- 1.0	- 10.0	12.0
158	PARADISINO	CH00101	1955	1990	C	- 12.0	3.0	4.0	- 3.0	0.0
159	PIERREDAR	CH00049	1921	1990	E	- X	- X	- X	- X	- X
160	PIZOL	CH00081	1894	1990	C	- 22.0	5.0		- 14.0	SN
161	PLATTALVA	CH00114	1969	1990	C	- 10.0	1.0		- 8.0	- 4.0
162	PORCHABELLA	CH00088	1893	1990	C	- 9.0	- 10.0		- 15.0	- 6.0
163	PRAPIO	CH00048	1898	1990	C	- 15.0	- 10.0	- 5.0	0.0	ST
164	PUNTEGLIAS	CH00083	1895	1989	C	- 22.0	- X		- 38.0	- 22.0
165	RAETZLI	CH00065	1924	1990	C	- 20.0	- X	- 56.0	0.0	- 16.0
166	RHONE	CH00001	1970	1990	A	- 31.0	- 10.0	- 12.0	- 7.0	1.0
167	RIED	CH00017	1895	1990	C	- 6.0	- 12.0	- X	- X	- X
168	ROSEG	CH00092	1894	1990	C	0.0	- 12.0	- 47.0	- 30.0	- 84.0
169	ROSENLAUI	CH00056	1880	1990	E	- X	- X	- X	- X	- X
170	ROSSBODEN	CH00105	1891	1990	C	2.0	10.0	2.0	3.0	- 9.0
171	ROTFIRN NORD	CH00069	1956	1990	C	- 5.0	- 12.0	- X	- 9.0	- 11.0
172	SALEINA	CH00042	1888	1990	C	- 24.0	- 10.0	- 6.0	- 26.0	- 18.0
173	SANKT ANNA	CH00067	1926	1989	C	- 12.0	- 5.0		- 7.0	- 1.0
174	SARDONA	CH00091	1895	1990	C	- 23.0	- 8.0		- 16.0	27.0
175	SCHWARZ	CH00062	1924	1990	C	- 8.0	- 3.0	- 11.0	- 43.0	- 1.0
176	SCHWARZBERG	CH00010	1915	1990	A	6.0	- 5.0	- X	- X	- 10.0
177	SESVENNA	CH00097	1956	1990	C	- 7.0	- 5.0	- 6.0	- 9.0	- 2.0
178	SEX ROUGE	CH00047	1898	1990	C	- 22.0	- X	- X	ST	ST
179	SILVRETTA	CH00090	1956	1990	A	- 9.0	- 13.0	- 14.0	- 6.0	- 15.0
180	STEIN	CH00053	1894	1990	C	- 5.0	- 7.0	- 6.0	- 15.0	- 12.0
181	STEINLIMMI	CH00054	1961	1990	C	- 12.0	- 11.0	- 10.0	- 18.0	- 3.0
182	SULZ	CH00079	1912	1989	C	- 10.0	- 5.0			- 22.0
183	SURETTA	CH00087	1921	1990	C	48.0	- 43.0	- 38.0	70.0	- 14.0
184	TAELLIBODEN	CH00008	1922	1990	D	- 8.0	- 2.0			+ X
185	TIATSCHA	CH00096	1926	1990	C	- 10.0	- 13.0	- 2.0	- 1.0	ST
186	TIEFEN	CH00066	1925	1990	C	- 14.0	- 7.0		- 20.0	3.0
187	TRIENT	CH00043	1878	1990	C	- 19.0	- 15.0	- X	- 58.0	- 40.0
188	TRIFT (GADMEN)	CH00055	1921	1990	E	- X	- X		- X	- X
189	TSANFLEURON	CH00033	1892	1990	C	- 15.0		- 6.0	- 2.0	- 18.0
190	TSCHIERVA	CH00093	1943	1990	C	- 9.0	- 19.0	- 21.0	- 45.0	- 24.0
191	TSCHINGEL	CH00060	1893	1990	C	- 9.0	- 4.0	- 2.0	- 5.0	0.0
192	TSEUDET	CH00040	1890	1990	C	- 12.0	- 22.0	16.0	- 10.0	- 27.0
193	TSIDJIORE NOUVE	CH00028	1880	1990	C	- 4.0	- 8.0	- 6.0	14.0	6.0
194	TURTMANN (WEST)	CH00019	1883	1990	C	7.0	3.0	- 12.0		2.0
195	UNT.GRINDELWALD	CH00058	1880	1990	E	- X	- X	- X	ST	- X
196	UNTERAAR	CH00051	1893	1990	A	- 17.0	- 30.0	- 37.0	- 43.0	- 26.0
197	VAL TORTA	CH00118	1970	1990	C	- 9.0	SN	- 2.0	9.0	- 5.0
198	VALLEGGIA	CH00117	1971	1990	C	- X	- 10.0	- 6.0	- 2.0	- 7.0
199	VALSOREY	CH00039	1889	1990	C	- 9.0	- 19.0	- 9.0	- 25.0	- 43.0

NR	GLACIER NAME	PSFG NR	FIRST SURVEY	LAST SURVEY	METHOD	1991	1992	1993	1994	1995
200	VERSTANKLA	CH00089	1926	1990	C	- 6.0	- 10.0	- X	- 30.0	- 3.0
201	VORAB	CH00085	1893	1990	C	- 29.0	- 19.0		- 22.0	SN
202	WALLENBUR	CH00071	1893	1990	C	- 6.0		- X	- 13.0	- 3.0
203	ZINAL	CH00022	1891	1990	C	- 15.0	- 30.0	- 7.0	- 4.0	- 6.0
204	ZMUTT	CH00015	1892	1990	C	3.0	- 2.0	2.0	0.0	
	AUSTRIA									
205	AEU.PIRCHLKAR	A00229	1981	1990	C	3.5	1.8	- 1.5	- 3.0	- .8
206	ALP.KRAEUL F.	A00321	1975	1990	C	- 2.6	- 8.6	- 2.8	- 10.6	
207	ALPEINER F.	A00307	1881	1990	C	- 8.5	- 14.3	- 10.6	- 7.7	- 24.9
208	BACHFALLEN F.	A00304	1922	1990	C	- 5.5	- 11.3	- 8.4	- 7.7	- 11.2
209	BAERENKOPF K.	A00702	1924	1990	C	- 3.4	- 27.5	- 3.2	- 5.3	4.4
210	BERGLAS F.	A00308	1891	1990	C	- 1.7	- 10.1	- 5.6	- 10.5	- 8.0
211	BIELTAL F.	A0105A	1924	1990	C	- 8.9	- 8.8	- 5.0	- 12.6	- 7.1
212	BOCKKOGEL F.	A00302	1922	1990	E	- X	- X	- X	- X	
213	BRENNKOGL K.	A00727	1987	1990	C	- 2.3	- 9.3	- 11.5	- 14.4	- 4.0
214	DAUNKOGEL F.	A0310A	1891	1990	C	- 2.6	- 10.2	- 4.3	- 6.5	- 4.8
215	DIEM F.	A00220	1893	1990	C	- 3.7	- 1.6	- 3.8	- 6.7	- 5.1
216	DORFER K.	A00509	1896	1990	C	- 6.3	- 16.6	- 9.8	- 13.6	- 13.2
217	E.GRUEBL F.	A00317	1891	1990	C	- 1.3	- 13.2	- 6.4	- 7.2	
218	EISKAR G.	A01301	1992	1992	C			- 2.0	- .4	- 5.0
219	FERNAU F.	A00312	1890	1990	C	- 1.5	- 4.0	- 2.9	- 7.2	- 3.0
220	FREIGER F.	A00320	1974	1990	C	- 2.9	- 7.5	- 6.9	- 4.2	- 10.3
221	FREIWAND K.	A00706	1950	1990	C	- 7.0	- 4.4	- 1.1	- 10.9	SN
222	FROSNITZ K.	A00507	1923	1990	C	- 3.0	- 5.5	- 5.5	- 6.7	- 1.6
223	FRUSCHNITZ K.	A00722	1974	1986	E	- X				
224	FURTSCHAGL K.	A00406	1978	1990	E	- X	- X	- X	- X	- X
225	GAISKAR F.	A00325	1983	1990	C	- 5.6	- 11.5	- X	- 5.9	- 2.5
226	GAISSBERG F.	A00225	1891	1990	C	- 6.5	- 2.1	- 17.2	- 5.8	- 7.5
227	GEPATSCH F.	A00202	1896	1990	C	- 4.4	- 6.2	- 6.0	- 10.8	- 8.4
228	GOESSNITZ K.	A01201	1982	1990	C	- 3.3	- 7.3	- 10.9	- 21.1	- 6.6
229	GR GOLDBERG KEE	A0802B		1975	C	- 2.5	- 12.1	- 5.5	- 15.0	- 4.2
230	GR.GOSAU G.	A01101	1933	1990	C	- 2.2	- 14.4	- 4.0	- 8.2	- 10.5
231	GROSSELEND K.	A01001	1898	1990	C	0.9	- 6.7	- 7.8	- 29.2	- 6.7
232	GRUENAU F.	A00315	1891	1990	C	6.0	- 6.0	- 17.2	- 12.7	- 15.3
233	GURGLER F.	A00222	1895	1990	C	- 2.5	- 6.3	- 1.2	- 7.3	- 3.4
234	GUSLAR F.	A00210	1894	1990	C	- 11.5	- 12.8	- 12.8	- 13.8	- 10.5
235	HABACH KEES	A00504		1990	E	- X				
236	HALLSTAETTER G.	A01102	1843	1990	C	0.4	- 7.7		- 8.7	- 4.9
237	HINTEREIS F.	A00209	1891	1990	C	- 17.2	- 23.4	- 22.4	- 21.8	- 13.1
238	HOCHALM K.	A01005	1898	1990	C	0.3	- 15.0	- 12.4	- 6.1	- 5.1
239	HOCHJOCH F.	A00208	1890	1990	C	- 25.7	- 25.5	- 32.2	- 27.4	- 31.4
240	HOCHMOOS F.	A00309	1946	1990	C	- 4.0	- 1.7	- 2.0	- 2.0	
241	HOFMANNS K.	A00724	1977	1987	E	- X				

NR	GLACIER NAME	PSFG NR	FIRST SURVEY	LAST SURVEY	METHOD	1991	1992	1993	1994	1995
242	HORN K.(SCHOB.)	A01202	1983	1990	C	- 2.8	- 5.8	- 2.8	- 4.1	- 4.3
243	HORN K.(ZILLER)	A00402	1881	1990	C	- 2.7	- 8.7	- 4.7	- 7.7	- 9.3
244	INN.PIRCHLKAR	A00228	1982	1990	C	1.4	0.4	0.1	- 11.4	1.4
245	JAMTAL F.	A00106	1892	1990	C	- 14.6	- 9.0	- 9.2	- 11.1	- 7.1
246	KA.TAUERN K.S	A0602B	1961	1990	C	- 2.1	- 27.1		- 18.8	
247	KAELBERSPITZ K.	A01003	1927	1990	C	- 4.6	- 14.7	- 7.1	- 7.1	1.4
248	KARLES F.	A00207	1950	1990	C	- 9.2	- 13.0	- 7.9	- 4.5	- 2.0
249	KARLINGER K.	A00701	1896	1990	C	- 12.0	- 10.0	- 84.0	- 37.0	- X
250	KESSELWAND F.	A00226	1965	1990	C	- 17.5	- 22.3	- 28.4	- 36.1	- 33.9
251	KL.FLEISS K.	A00801	1896	1990	C	- 2.6	- 20.8	- 13.0	- 10.8	- 2.2
252	KLEINEISER K.	A00717	1961	1990	C	- .2	- 4.7		- 8.7	
253	KLEINELEND K.	A01002	1898	1990	C	- 4.3	- 19.4	- 4.8	- 6.0	1.4
254	KLOSTERTALER M.	A0102B	1964	1990	C	- 9.1	- 7.4	- 2.9	- 11.0	- 4.1
255	KLOSTERTALER N.	A0102A	1968	1990	C	- 4.1	- 5.1	- 1.0	- 4.2	- 7.6
256	KLOSTERTALER S.	A0102C	1924	1990	C	- 10.9	- 11.4	- 3.8	- 12.7	
257	KRIMMLER K EAST	A0501B		1992	C			- 7.8	- 10.8	- 6.3
258	KRIMMLER K.	A0501A	1895	1990	C	- 2.5	- 7.2	2.5	- 4.4	- 16.6
259	KRUML K.	A00806	1985	1990	C	- 1.5	- 7.0	- 6.5		SN
260	LAENGENTALER F.	A00305	1922	1990	C	- 3.2	- 5.3	- 4.2	- 4.9	SN
261	LANDECK K.	A00604	1979	1990	C	- .7	- 1.4		- 12.5	
262	LANGTALER F.	A00223	1891	1990	C	- 18.0	- 27.5	- 6.0	- 25.0	- 15.8
263	LAPERWITZ K.	A00721	1974	1986	E	- X				
264	LARAIN F.	A00107	1928	1990	C	- 24.5	- 23.7			
265	LIESENSER F.	A00306	1922	1990	C	- 7.7	- 16.6	- 6.4	- 16.1	- 4.9
266	LITZNERGL.	A00101	1932	1990	C	4.5	- 1.7	- 1.7	0.9	- 3.3
267	MARZELL F.	A00218	1891	1990	C	- 4.0	- 6.8	1.7	- 6.8	- 3.6
268	MAURER K.(GLO.)	A00714	1961	1990	C	0.2	- 7.6	- 1.0	- 3.9	SN
269	MAURER K.(VEN.)	A00510	1896	1990	C		- 61.8	- 8.8	- 6.5	SN
270	MITTELBERG F.	A00206	1924	1990	C	- 12.1	- 6.3	- X	- 6.5	0.9
271	MITTERKAR F.	A00214	1891	1990	C	- 22.5	- 21.8	- 3.0	- 10.6	SN
272	MUTMAL F.	A00227	1969	1990	C	- 8.1	- 21.4	- 16.1	- 24.2	- 7.4
273	NIEDERJOCH F.	A00217	1891	1990	C	- 19.7	- 14.4	- 9.2	- 14.2	- 6.4
274	OBERSULZBACH K.	A00502	1880	1990	C	- 6.1	- 13.6	- 14.8	- 18.5	- 8.2
275	OCHSENTALERGL.	A00103	1901	1990	C	- 7.2	- 18.7	- 15.2	- 25.1	- 9.2
276	OEDENWINKEL K.	A00712	1960	1990	C	- 4.7	- 1.4	0.3	- 3.2	0.3
277	PASTERZEN K.	A00704	1879	1990	C	- 33.5	- 7.6	- 17.5	- 17.1	- 13.6
278	PFAFFEN F.	A00324	1981	1990	C	- 6.1	- 11.5	- 2.5	- 15.0	- 6.5
279	PFANDLSCHARTEN	A00707	1931	1990	C	- 9.5	- 13.1			
280	PRAEGRAT K.	A00603	1961	1990	C	- 4.5	- 9.2		- 14.4	
281	RETTENBACH F.	A00212	1952	1990	C	- 5.4	- 5.9	- 5.9	- 9.8	- 3.4
282	RIFFL K. N	A00718	1961	1990	C	2.7	- 8.6	1.1	- 4.7	SN
283	RIFFLKAR KEES	A0713A	1961	1990	E	- X				
284	ROFENKAR F.	A00215	1891	1990	C	- 6.0	- 10.6	- 3.8	- 9.8	- 7.3
285	ROTMOOS F.	A00224	1891	1990	C	- 1.0	- 8.8	- 8.0	- 8.0	- 12.1

NR	GLACIER NAME	PSFG NR	FIRST SURVEY	LAST SURVEY	METHOD	VARIATIONS IN METERS 1991	1992	1993	1994	1995
286	SCHALF F.	A00219	1924	1990	C	- 2.9	- 9.6	- 15.5		- 18.1
287	SCHATTENSPITZ	A00108	1973	1990	C	- 2.7	- 15.0	- 5.5	- 5.2	
288	SCHAUFEL F.	A00311	1922	1990	C	- 1.9	- 4.1	- 5.6	- 11.1	- 3.3
289	SCHLADMINGER G.	A01103	1933	1990	C	- 1.4	- 3.0		- 1.4	- .1
290	SCHLAPPEREBEN K	A00805	1983	1990	C	- 2.0	- 2.8	- 2.9	- .5	- 3.5
291	SCHLATEN K.	A00506	1891	1990	C	- 4.6	- 7.9	- 6.8	- 10.5	- 7.9
292	SCHLEGEIS K.	A00405	1978	1990	E	- X	- X	- X	- X	- X
293	SCHMIEDINGER K.	A00726	1981	1990	C	- .1	- 3.6	- 2.3	- 2.8	
294	SCHNEEGLOCKEN	A00109	1973	1990	C	- 5.8	- 8.2	- 4.3	- 7.7	- 5.8
295	SCHNEELOCH G.	A01104	1969	1990	C	- 1.3	- 5.2		- 2.2	- 6.7
296	SCHWARZENBERG F	A00303	1905	1990	C	- 6.8	- 13.8	- 10.8	- 15.3	- 6.8
297	SCHWARZENSTEIN	A00403	1881	1990	C	5.5	- 15.0	- 17.0	- 16.0	- 12.0
298	SCHWARZKARL K.	A00716	1961	1990	C	- 4.4	- 11.1	- 6.0	- 19.7	- 2.3
299	SCHWARZKOEPFL K	A00710	1954	1990	C	- 7.0	- 11.5	- 6.3	- 17.9	- 14.8
300	SEXEGERTEN F.	A00204	1919	1990	C	- 6.0	- 28.5	- 10.7	- 39.0	- 5.3
301	SIMMING F.	A00318	1922	1990	C	- 1.9	- 13.4	- 17.5	- 43.4	- 22.6
302	SIMONY K.	A00511	1896	1990	C	- 4.8	- 9.8	- 8.1	- 11.5	- 15.2
303	SONNBLICK K.	A0601A	1963	1990	C	- 2.1	- 7.9	0.4	- 8.7	0.7
304	SPIEGEL F.	A00221	1891	1990	C	- 6.8	- 2.2	- 4.4	- 10.4	- 9.8
305	SULZENAU F.	A0314A	1891	1990	C	- 4.0	- 20.3	- 29.9	- 34.2	- 104.4
306	SULZTAL F.	A00301	1922	1990	C	- 4.3	- 18.5	- 35.8	- 21.6	- 7.8
307	TASCHACH F.	A00205	1924	1990	C	- 4.9	- 12.8	- 12.9	- 10.5	- 13.5
308	TAUFKAR F.	A00216	1891	1990	C	- 8.9	- 12.4	- 3.4	- 6.2	- 6.2
309	TEISCHNITZ K.	A00723	1975	1986	E	- X				
310	TOTENFELD	A00110	1976	1990	C	- 2.7	- 2.1	- 3.2	- 5.1	- .3
311	TRIEBENKARLAS F	A00323	1978	1990	C	0.1	- 12.0	- 14.3	- 16.3	- 12.3
312	UEBERGOSS.ALM	A00901	1892	1990	C	- 5.8	- 3.0			
313	UMBAL K.	A00512	1896	1990	C	- 18.2		- 24.3	- 24.5	- 68.5
314	UNT. RIFFL KEES	A0713B	1960	1990	C	- 3.0	- 4.7	- 5.8	- 4.4	- 4.1
315	UNTERSULZBACH K	A00503	1896	1990	C	- 5.0	- 7.5	- 6.1	- 11.2	0.7
316	VD.KASTEN K.	A00719	1961	1980	E	- X				
317	VERBORGENBERG F	A00322	1977	1990	C	- 2.7	- 11.3	- 2.3	- 7.4	- 7.3
318	VERMUNTGL.	A00104	1913	1909	C	- 7.4	- 12.0	- 5.3	- 15.2	- 4.3
319	VERNAGT F.	A00211	1888	1990	C	- 13.7	- 11.0	- 15.9	- 16.5	- 13.3
320	VILTRAGEN K.	A00505	1891	1990	C	- 3.9	- 10.7	- 10.4	- 12.0	- 12.0
321	W.TRIPP K.	A01004	1925	1990	C	0.4	- 6.4		- 5.5	SN
322	WASSERFALLWINKL	A00705	1943	1990	C	- 5.4	- 15.6	- 1.7	- 7.7	3.6
323	WAXEGG K.	A00401	1895	1990	C	- 6.2	- 3.0	- 12.0	- 8.0	- 38.0
324	WEISSEE F.	A00201	1891	1990	C	- 8.3	- 10.6	- 25.6	- 4.0	- 2.9
325	WIELINGER K.	A00725	1980	1990	C	- 47.0	- 49.0	- X	- X	- X
326	WILDGERLOS	A00404	1973	1990	C	6.1	- 30.8	- 12.2	- 20.0	- 8.4
327	WINKL K.	A01006	1928	1990	C	- .7	- 26.3	- 1.2	- 2.4	- 5.0
328	WURFER K.	A00715	1961	1990	C	- 5.0	- 16.4	SN	- 16.8	
329	WURTEN K.	A00804	1896	1990	C	- 10.3	- 12.5	- 5.5	- 14.8	- 2.6

NR	GLACIER NAME	PSFG NR	FIRST	LAST	METHOD	VARIATIONS IN METERS				
			SURVEY			1991	1992	1993	1994	1995
330	ZETTALUNITZ K.	A00508	1896	1990	C	- 3.4	- 21.0	- 13.7	- 21.1	- 18.0
	ITALY									
331	AGNELLO	I00029	1928	1990	C	- 2.5			SN	- X
332	ALTA (VEDRETTA)	I00730	1923	1990	C		- 8.5	- 7.0	- 10.0	- 17.0
333	AMOLA	I00644	1942	1990	C	- 1.0	- 9.0		- 14.0	- 16.0
334	ANDOLLA NORD	I00336	1927	1990	C	- 8.0	- 24.0	1.5		- 2.0
335	ANTELAO INF.	I00967	1939	1990	C	- 2.0	- 7.0	- 2.0	- 3.0	- 3.0
336	ANTELAO SUP.	I00966	1934	1990	C	- 3.5	- 2.5	0.0	- 4.5	- 3.0
337	AURONA	I00338	1956	1990	C				- X	- X
338	BARBADORSO D.	I00778	1935	1990	C		- 65.0	- 29.0		
339	BASEI	I00064	1925	1990	C	- 3.0	- 1.0	0.0	0.0	
340	BELVEDERE	I00325	1927	1990	C	4.0	- 3.0	- 4.0	2.0	- 2.0
341	BESSANESE	I00040	1928	1990	C	- 1.0	- 3.0	- 1.5	- 2.0	0.0
342	BRENVA	I00219	1929	1990	C	8.0	- 9.0	0.0		
343	CASPOGGIO	I00435	1928	1990	C	- 2.0	- X	- X	- 43.0	- 12.0
344	CEVEDALE	I00732	1923	1990	C		- X	- 17.0	- 16.0	- 19.0
345	CHAVANNES	I00204	1930	1989	C	- 15.0	- 5.0	1.5	- 1.0	
346	CIARDONEY	I00081		1990	C	- 2.5	- 2.0	- 3.0	- 2.0	- .5
347	COLLALTO	I00927	1932	1990	C	- 2.0	- 7.5	- 8.0	- 4.5	- 5.0
348	CRISTALLO	I00937	1949	1990	C	0.0	- 12.0	- 8.0	- 6.0	- 17.5
349	CRODA ROSSA	I00828		1990	C		- 4.0		- 4.0	
350	DOSDE OR.	I00473	1932	1990	C	- 28.0	- 15.5	- 32.0	- 37.0	- 9.0
351	DOSEGU	I00512	1925	1990	C		- 60.0	- X	- 17.0	- 22.0
352	FELLARIA OCC.	I00439	1915	1990	C	- 13.0	- 12.0	- 9.5	- 9.5	- 15.0
353	FONTANA OCC.	I00780	1925	1990	C			- 14.5		
354	FORCOLA	I00731	1923	1990	C		- 43.0	- 13.0	- 21.0	- 18.0
355	FORNI	I00507	1880	1989	C	- 124.0	- 30.0	- 22.0	- 95.0	- 19.5
356	GIGANTE CENTR.	I00929	1930	1990	C		- X	- 92.0		- 21.5
357	GIGANTE OCC.	I00930	1930	1990	C	- 2.0	- 7.0	- 5.0	- 1.5	- 2.5
358	GOLETTA	I00148	1929	1990	C		- 19.5		- 6.5	- 4.0
359	GRAN PILASTRO	I00893	1932	1990	C	- 10.5		- 26.0		
360	HOSAND SETT.	I00357	1926	1990	C	- 5.0	- 7.5	0.5	0.0	6.5
361	LA MARE	I00699	1899	1990	C	- 33.0	- 68.0	- 23.5	- 59.0	- 5.5
362	LANA	I00913	1930	1990	C	- 3.0	- 8.0	- 6.5	- 9.0	- 3.5
363	LEX BLANCHE	I00209	1929	1990	C		- 40.0	- X	- X	
364	LUNGA(VEDRETTA)	I00733	1923	1990	C		- 26.0	- 5.0	- 18.0	- 47.0
365	LYS	I00304	1927	1990	C	3.0	- 11.0	- 7.0	- 12.0	- 12.0
366	M. NEVOSO OCC.	I0931X	1930	1990	C	- 2.5	- 6.0	- 14.0	- 1.0	
367	MALAVALLE	I00875	1928	1990	C	- 9.0	- 8.0	- 2.0	- 8.0	- 7.5
368	MANDRONE	I00639	1896	1990	C	- 5.0	- 14.0	- 2.0	- 3.0	- 2.5
369	MARMOLADA	I00941	1925	1990	C	- 11.5	- 13.5		- 10.0	
370	MONCORVE	I00131	1924	1990	C	- 5.0	- 5.0	- 1.0	- 3.0	
371	NARDIS OCC.	I00640	1925	1990	C	- 10.0	- 4.5	2.0		- 10.0

NR	GLACIER NAME	PSFG NR	FIRST SURVEY	LAST SURVEY	METHOD	VARIATIONS IN METERS 1991	1992	1993	1994	1995
372	NEVES OR.	I00902	1932	1990	C	- 13.0	- 19.0	- 13.0	- 12.5	- 12.0
373	NISCLI	I00633	1919	1990	C	- 5.5	- 3.5	0.0		- 7.5
374	PENDENTE	I00876	1933	1990	C	- 17.0	- 9.0	- 3.0	- 5.0	- 15.0
375	PIODE	I00312	1924	1990	C	- 19.0		- 34.0	- 51.0	- 5.0
376	PISGANA OCC.	I00577	1920	1990	C	- X	- 59.0	- X		- X
377	PIZZO SCALINO	I00443	1911	1990	C	- 8.5	- 8.0	- 2.0	- 14.0	- 10.0
378	PRE DE BAR	I00235	1929	1990	C	- 6.5	- 32.0	7.0	- 16.0	- 16.0
379	PRESANELLA	I00678	1951	1990	C	0.0	- 4.5	- 12.5	- 10.0	- 8.5
380	QUAIRA BIANCA	I00889	1931	1990	C	- 7.0	- 6.0	- 11.0		
381	ROSIM	I00754	1926	1990	C		- 6.5	- 7.0	- 7.5	0.0
382	ROSSA (VEDR.)	I00697	1923	1990	C	- 11.0	- 4.0	- 6.0	- 19.0	- 2.5
383	ROSSO DESTRO	I00920	1952	1990	C	- 9.5	- 8.5	- 17.0	- 10.0	
384	RUTOR	I00189	1927	1990	C	- 10.5	- 7.0	- 1.5	- 20.5	- 6.5
385	SASSOLUNGO OCC.	I00926	1930	1989	C	- 11.0	- 11.0	- 2.5	- 10.5	
386	SERANA (VEDR.)	I00728	1925	1990	C			- 8.0	- X	- 16.0
387	SFORZELLINA	I00516	1925	1990	C	4.0	- 4.0	- X	- 4.5	- 5.0
388	SOLDA	I00762	1922	1990	C		3.0	- 12.0	- 8.0	- 8.0
389	TESSA	I00829	1926	1990	C		0.0		- 4.0	
390	TOULES	I00221	1929	1990	C	- 12.0	- 12.0	- 2.0		- 86.0
391	TRAVIGNOLO	I00947	1925	1981	C	- 59.0	- 3.5		- 3.0	- 3.5
392	TRESERO	I00511	1925	1990	C		- 10.0		- X	- 6.0
393	TZA DE TZAN	I00259	1927	1990	C	+ X	- X	- 15.0	- 15.0	- 11.5
394	ULTIMA (VEDR.)	I00729	1925	1990	C		- 13.0	- 8.0	- 5.5	- 4.5
395	VALLE DEL VENTO	I00919	1932	1990	C	- 9.0	- 10.0	- 13.0	- 2.5	
396	VALLELUNGA	I00777	1922	1990	C		- 15.0	ST		
397	VALTOURNENCHE	I00289	1927	1989	C	- .5	- 1.5	- 9.0	- 8.0	
398	VENEROCOLO	I00581	1919	1990	C	- 6.0	- 6.0		- 14.5	- 19.0
399	VENEZIA (VEDR.)	I00698	1925	1990	C	- 9.5	- 38.5	- 15.0	- 16.5	- X
400	VENTINA	I00416	1890	1990	C	1.0	- 11.0	- 15.0	- 10.0	- 14.0
401	VITELLI	I00483	1921	1990	C		- 42.0	- 7.0	0.0	- X
402	ZAI DI DENTRO	I00749	1924	1979	C		- 61.0	- 2.5	- 5.0	- 4.0
403	ZAI DI MEZZO	I00750	1930	1979	C		- 58.0	- 6.0	- 5.5	- 3.0
	KENYA									
404	CESAR	KN00004	1899	1987	A			- 25.0		
405	DARWIN	KN00006	1919	1987	A			- 15.0		
406	DIAMOND	KN00010	1899	1987	A			0.0		
407	FOREL	KN00011	1899	1987	A			0.0		
408	GREGORY	KN00009	1899	1990	A			- 30.0		
409	HEIM	KN00012	1899	1987	A			0.0		
410	JOSEPH	KN00003	1899	1987	A			0.0		
411	KRAPF	KN00001	1899	1987	A			- 25.0		
412	LEWIS	KN00008	1899	1990	A			- 25.0		
413	NORTHEY	KN00013	1899	1987	A			0.0		

NR	GLACIER NAME	PSFG NR	FIRST SURVEY	LAST SURVEY	METHOD	VARIATIONS IN METERS 1991	1992	1993	1994	1995
414	TYNDALL	KN00005	1899	1987	A			- 50.0		
	<u>POLAND</u>									
415	MIEGUSZOWIECKIE	PL00140	1958	1988	C	1.0	- 2.0		SN	2.0
416	POD BULA	PL00111	1978	1990	C	34.0	- 14.1	2.4	- 1.0	13.1
417	POD CUBRYNA	PL00180	1978	1988	C	- 1.0	1.0	- 2.0	2.0	1.0
	<u>C.I.S.</u>									
418	ABRAMOV	SU04101	1967	1990	C	- 9.1	- 12.9	- 22.4	- 25.3	ST
419	ALIBEKSKIY	SU03002	1954	1990	C				9.0	- 8.0
420	BEZENGI	SU03006	1956	1990	C	- 7.0				- 14.0
421	BOLSHOY AZAU	SU03004	1887	1987	B		- 69.0			
422	DJANKUAT	SU03010	1965	1990	B		- 6.0			- 10.0
423	DZHELO	SU07106	1952	1990	C	- 19.0	- 18.0	- 3.0		- 14.3
424	GARABASHI	SU03031	1887	1987	B		0.0			
425	KARA-BATKAK	SU05080	1957	1990	C	- 2.5	- 5.5	- 3.3	- 6.8	- 7.2
426	KHAKEL	SU03003	1957	1990	C				- 16.0	8.0
427	KORUMDU	SU07103	1952	1990	C	- 3.0	- 12.0	0.0	- 3.5	- 1.0
428	KOZELSKIY	SU08005	1948	1990	C					ST
429	LEVIY AKTRU	SU07102	1952	1990	D	- 16.0	- 11.0	- 1.0	- 22.0	- 3.0
430	LEVIY KARAGEMSK	SU07107	1952	1990	C	- 19.0	0.0	ST	ST	- 3.8
431	MALIY AKTRU	SU07100	1952	1990	D	- 5.0	- 10.0	0.5	- 9.0	- 12.0
432	MALIY AZAU	SU03032	1887	1987	B		0.0			
433	MIZHIRGICHIRAN	SU03043	1956	1990	C	15.9				61.0
434	MURAVLEV	SU06002	1966	1990	C	- 3.5				
435	NO. 122 (UNIV.)	SU07108	1952	1990	C	- 14.0	- 8.0	ST		- 6.6
436	NO.125 (VODOP.)	SU07105	1956	1990	D	- 1.0	- 4.8	0.0	- 1.7	- 1.5
437	NO.462V(KUL.N.)	SU03005	1934	1990	C	- 7.5				
438	PRAVIY KARAGEMS	SU07109	1952	1990	C	- 12.0	- 7.0	ST		- 5.0
439	SHUMSKIY	SU06001	1966	1990	C	- 7.2				
440	TS.TUYUKSUYSKIY	SU05075	1956	1990	C	- 17.0	- 8.4	- 7.3	- 13.8	- 20.8
441	TSEYA	SU03007	1927	1990	C	- 11.8	- 1.7	- 16.3		- 5.0
442	YUGO-VOSTOCHNIY	SU03018	1957	1991	C		- 11.4	- 1.5	4.2	17.0
443	YUZHNIY	SU03017	1957	1991	C		- 4.1	- 2.7	3.5	- 3.7
	<u>CHINA</u>									
444	URUMQIHE S.NO.1	CN00010	1960	1990	C	- 6.5	- 3.4	- 3.8	- 6.8	- 6.2
	<u>PAKISTAN</u>									
445	ALING	PK00035		1989				+ X		
446	BUALTAR	PK00004		1988			1800.0			- X
447	KARAMBAR	PK00028		1993				- X	+ X	

NR	GLACIER NAME	PSFG NR	FIRST	LAST	METHOD	VARIATIONS IN METERS				
			SURVEY			1991	1992	1993	1994	1995
	NEPAL									
448	AX010	NP00005	1978	1989	C	- 30.0				25.0
449	DX080	NP00007	1976	1989	C					- 29.6
450	GYAJO	NP00011	1970	1978	C					- 75.6
451	KONGMA	NP00010	1970	1989	C					- 13.0
452	KONGMA TIKPE	NP00009	1974	1989	C					- 53.7
453	RIKHA SAMBA	NP00012	1974	1974	C				- 205.7	
454	YALA	NP00004	1982	1989	C				- 30.9	
	NEW ZEALAND									
455	ABEL	NZ893A3		1989	A			+ X	ST	ST
456	ADAMS	NZ08974		1987	A		- X	- X		+ X
457	ALMER	NZ888B1		1989	A			ST	+ X	+ X
458	ANDY	NZ863C1		1987	A			ST	- X	+ X
459	ASHBURTON	NZ688A1		1989	A			+ X		+ X
460	BALFOUR	NZ882B1		1985	A					+ X
461	BARLOW	NZ893A2		1989	A		- X	- X		+ X
462	BLAIR	NZ711D1		1989	A			- X	+ X	+ X
463	BONAR	NZ863A1		1987	A					+ X
464	BREWSTER	NZ868C1		1989	A		- X	+ X	- X	ST
465	BURTON	NZ888A1		1989	A			ST		ST
466	CAMERON	NZ685B2		1988	A			- X	+ X	ST
467	CLASSEN	NZ711M1		1989	A				- X	ST
468	COLIN CAMPBELL	NZ693C1		1988	A					+ X
469	CROW	NZ664C2		1988	A					+ X
470	DART	NZ752C2	1980	1989	A		- X	+ X		- X
471	DONNE	NZ851B2		1987	A					- X
472	DOUGLAS (KAR.)	NZ880B2		1987	A			ST		ST
473	DOUGLAS (RAK.)	NZ685B1		1989	A		SN	SN	SN	SN
474	EVANS	NZ08972		1988	A		ST			ST
475	FITZGERALD	NZ880B3		1984	A			- X		+ X
476	FOX	NZ882A1		1989	A	+ X	+ X	+ X	+ X	+ X
477	FRANZ JOSEF	NZ888B2	1867	1989	A	+ X	+ X	+ X	+ X	+ X
478	GLENMARY	NZ711F1		1989	A				+ X	ST
479	GODLEY	NZ711M3		1989	A					- X
480	GREY AND MAUD	NZ711M2		1989	A				- X	ST
481	HOOKER	NZ711H2		1985	A		- X	- X		- X
482	HORACE WALKER	NZ880B1		1987	A					+ X
483	IVORY	NZ09011	1969	1989	A		- X	- X	- X	ST
484	JACK	NZ08751		1989	A			+ X	+ X	SN
485	JACKSON	NZ868B5		1989	A				ST	
486	JALF	NZ08861		1989	A			SN	- X	SN
487	KAHUTEA	NZ685E1		1989	A					+ X
488	KEA	NZ08971		1989	A			SN	SN	SN

NR	GLACIER NAME	PSFG NR	FIRST SURVEY	LAST SURVEY	METHOD	VARIATIONS IN METERS 1991	1992	1993	1994	1995
489	LA PEROUSE	NZ882B2		1985	A					ST
490	LAMBERT	NZ08973		1989	A		ST	+ X	- X	
491	LE BLANC	NZ868B3		1985	A				- X	+ X
492	LINDSAY	NZ08671		1989	A			SN	SN	SN
493	LYELL	NZ685C2		1989	A					- X
494	MARCHANT	NZ880A1		1986	A					ST
495	MARION	NZ863B4		1989	A			- X	ST	+ X
496	MARMADUKE DIXON	NZ664C1		1989	A			+ X	SN	
497	MC COY	NZ693C2		1985	A					+ X
498	MUELLER	NZ711H1		1989	A	- X	- X			- X
499	MURCHISON	NZ711J1		1989	A			- X		ST
500	PARK PASS 1	NZ752B1		1989	A				+ X	+ X
501	POET	NZ868B2		1986	A					+ X
502	RAMSAY	NZ685C3		1983	A					- X
503	REISCHEK	NZ685C1		1989	A					- X
504	RETREAT	NZ906A1		1989	A			SN	SN	SN
505	RICHARDSON	NZ711E1		1987	A			+ X		+ X
506	RIDGE	NZ711L1		1989	A				ST	SN
507	ROLLESTON	NZ911A2		1989	A			SN	SN	SN
508	SALE	NZ906B1		1993	A					+ X
509	SIEGE	NZ893A1		1989	A		- X	SN	ST	SN
510	SINCLAIR	NZ693C3		1985	A					+ X
511	SNOW WHITE	NZ863B2		1987	A			- X		- X
512	SNOWBALL	NZ863B3		1987	A			ST	ST	ST
513	SPENCER	NZ888A2		1989	A		+ X	+ X		+ X
514	STRAUCHON	NZ880A2		1986	A				- X	ST
515	TASMAN	NZ711I1		1989	A	- X	- X	- X	- X	- X
516	THERMA	NZ08641		1987	A					+ X
517	THURNEYSON	NZ711B1		1989	A		+ X		+ X	
518	TORNADO	NZ863C2		1986	A					- X
519	UNNAMED NZ664C	NZ664C1		1989	A			SN		SN
520	UNNAMED NZ685C	NZ685C4		1989	A		SN	SN	SN	+ X
521	UNNAMED NZ685F	NZ685F1		1989	A			SN	SN	
522	UNNAMED NZ752E	NZ752E1		1989	A			+ X	SN	SN
523	UNNAMED NZ752I	NZ752I1		1989	A		SN	SN	SN	SN
524	UNNAMED NZ797G	NZ797G1		1989	A			SN	SN	SN
525	UNNAMED NZ846	NZ08461		1989	A			+ X	+ X	+ X
526	UNNAMED NZ851B	NZ851B1		1989	A			ST	ST	ST
527	UNNAMED NZ863B	NZ863B1		1989	A			SN	SN	SN
528	UNNAMED NZ868B	NZ868B4		1980	A					ST
529	UNNAMED NZ911A	NZ911A1		1989	A			SN	SN	SN
530	VICTORIA	NZ882A1		1989	A					+ X
531	WHITBOURNE	NZ752C1		1988	A					- X
532	WHITE	NZ664C1		1989	A			+ X		+ X

NR	GLACIER NAME	PSFG NR	FIRST SURVEY	LAST SURVEY	METHOD	VARIATIONS IN METERS 1991	1992	1993	1994	1995
533	WHYMPER	NZ893B1		1980	A					- X
534	WIGLEY	NZ873B2		1989	A		- X			- X
535	WILKINSON	NZ906B2		1989	A					ST
536	ZORA	NZ868B1		1986	A					+ X
	ANTARCTICA									
537	BARTLEY	AN00016	1983	1990	C		- 1.8			0.2
538	CLARK CPI	AN00012	1982	1990	C					2.6
539	HART	AN00019	1985	1990	C		0.0			- .5
540	HEIMDALL	AN00003	1970	1991	C		3.5			
541	MESERVE MPII	AN00017	1983	1990	C		- 3.3			
542	VICTORIA UPPER	AN00013	1984	1990	C		1.8			
543	WRIGHT LOWER	AN00018	1975	1990	C		- 1.8		1.3	0.6
544	WRIGHT UPPER B	AN00011	1984	1990	C		- 1.2			

WORLD GLACIER MONITORING SERVICE

VARIATIONS IN THE POSITION OF GLACIER FRONTS

TABLE BB

ADDENDA FROM EARLIER YEARS

NR	Record number
GLACIER NAME	15 alphabetic or numeric digits
PSFG NUMBER	5 digits identifying glacier with alphabetic prefix denoting country
METHOD	a = aerial photogrammetry b = terrestrial photogrammetry c = geodetic ground survey (theodolite, tape etc.) d = combination of a, b or c e = other methods or no information
1ST SURVEY	Day, month and year of survey
2ND SURVEY	Day, month and year of following survey
VARIATION IN METERS	Variation in the position of the glacier front in horizontal projection expressed as the change in length between the surveys

Key to Symbols

+X : Glacier in advance
- X : Glacier in retreat
ST : Glacier stationary
SN : Glacier front covered by snow

NR	GLACIER NAME	PSFG NR	METHOD	1ST SURVEY D M Y	2ND SURVEY D M Y	VARIATIONS METERS
	COLOMBIA					
1	ALFOMBRALES E	CO0013B	A	13.1.1945	10.2.1959	- 50.0
				10.2.1959	11.1.1975	- 50.0
				11.1.1975	10.12.1985	- 80.0
				10.12.1985	19.1.1987	- 20.0
2	AZUFRADO E	CO0005B	A	13.1.1945	10.2.1959	60.0
				10.2.1959	11.1.1975	- 20.0
				11.1.1975	10.12.1985	- 130.0
				10.12.1985	19.1.1987	ST
3	AZUFRADO W	CO0005A	A	13.1.1945	10.2.1959	- 70.0
				10.2.1959	11.1.1975	- 20.0
				11.1.1975	10.12.1985	- 80.0
				10.12.1985	19.1.1987	ST
4	LA CABANA	CO00007	A	10.2.1959	11.1.1975	- 200.0
				11.1.1975	10.12.1985	- 200.0
				10.12.1985	19.1.1987	- 20.0
5	LA PLAZUELA	CO00006	A	13.1.1945	10.2.1959	- 20.0
				10.2.1959	11.1.1975	- 30.0
				11.1.1975	19.1.1987	- 220.0
6	LAGUNILLAS	CO00008	A	13.1.1945	10.2.1959	0.0
				10.2.1959	11.1.1975	0.0
				11.1.1975	10.12.1985	- 50.0
				10.12.1985	19.1.1987	- 10.0
7	LEONERA ALTA	CO00009	A	13.1.1945	10.2.1959	- 330.0
				10.2.1959	11.1.1975	- 180.0
				11.1.1975	10.12.1985	- 100.0
				10.12.1985	19.1.1987	- 30.0
8	NEREIDAS	CO00014	C	1958	6.3.1986	- 644.5
				6.3.1986	5.5.1987	- 40.0
				5.5.1987	18.3.1988	- 50.0
				18.3.1988	27.12.1990	- 150.0
	CHILE					
9	AMALIA	RC00056	A	1945	1986	-6000.0
10	ASIA	RC00055	A	1945	1984	- 195.0
				1984	1986	- 96.0
11	BALMACEDA	RC00060	A	1945	1984	-2496.0
				1984	1986	- 80.0
12	BERNARDO	RC00037	A	1945	1976	- 837.0
				1976	1984	- 304.0
13	CALVO	RC00053	A	1945	1984	0.0
				1984	1986	0.0
14	DICKSON	RC00063	A	1945	1984	-3120.0
				1984	1986	0.0

NR	GLACIER NAME	PSFG NR	METHOD	1ST SURVEY D M Y	2ND SURVEY D M Y	VARIATIONS METERS
15	EUROPA	RC00049	A	1945	1981	- 504.0
				1981	1986	- 234.0
16	GREVE	RC00040	A	1945	1976	-3317.0
				1976	1981	- 215.0
				1981	1984	- 102.0
				1984	1986	- 22.0
				1986	1987	- 80.0
17	GREY	RC00062	A	1945	1967	- 550.0
				1967	1975	- 350.0
18	HPS12	RC00043	A	1981	1984	- 180.0
				1984	1986	0.0
19	HPS13	RC00045	A	1945	1984	0.0
				1984	1986	0.0
20	HPS15	RC00046	A	1945	1984	0.0
				1984	1986	0.0
21	HPS19	RC00047	A	1981	1986	- 400.0
22	HPS28	RC00051	A	1945	1984	- 351.0
				1984	1986	-1028.0
23	HPS29	RC00052	A	1945	1984	- 234.0
				1984	1986	- 120.0
24	HPS31	RC00050	A	1945	1970	- 975.0
				1970	1984	- 252.0
25	HPS34	RC00054	A	1945	1984	- 39.0
				1984	1986	0.0
26	HPS38	RC00057	A	1945	1984	- 468.0
				1984	1986	240.0
27	HPS41	RC00058	A	1945	1984	- 360.0
				1984	1986	0.0
28	HPS8	RC00041	A	1945	1976	-1240.0
				1976	1979	- 60.0
				1979	1984	- 265.0
				1984	1986	66.0
29	HPS9	RC00042	A	1976	1979	- 30.0
				1979	1984	- 35.0
				1984	1986	- 134.0
30	OCCIDENTAL	RC00039	A	1945	1976	- 93.0
				1976	1984	- 592.0
				1984	1987	- 462.0
31	OFHIDRO	RC00036	A	1945	1976	-1643.0
				1976	1984	- 216.0
				1984	1986	134.0
32	PENGUIN	RC00048	A	1981	1986	- 60.0
33	PINGO	RC00061	A	1945	1984	-1326.0
				1984	1986	0.0

NR	GLACIER NAME	PSFG NR	METHOD	1ST SURVEY D M Y	2ND SURVEY D M Y	VARIATIONS METERS
34	PIO XI	RC00044	A	1925	9.1926	1000.0
				9.1926	12.1928	400.0
				12.1928	1945	-2500.0
				1945	1951	5400.0
				1951	1963	600.0
				1963	1969	500.0
				1969	1976	2400.0
				1976	1981	310.0
				1981	1986	- 400.0
35	SNOWY	RC00059	A	1945	1984	- 936.0
				1984	1986	0.0
36	TEMPANO	RC00038	A	1945	1976	-1178.0
				1976	1984	-1264.0
				1984	1986	- 694.0
	ARGENTINA					
37	FRIAS	RA00064	A	1984	1986	0.0
	SWEDEN					
38	HYLLGLACIAEREN	S00780	C	16.8.1984	15.9.1988	- 38.0
	KENYA					
39	CESAR	KN00004	A	1899	21.2.1947	- 120.0
				3.9.1947	3.9.1987	- 95.0
40	DARWIN	KN00006	A	21.2.1947	3.9.1987	- 60.0
41	DIAMOND	KN00010	A	21.2.1947	3.9.1987	- 40.0
42	FOREL	KN00011	A	21.2.1947	3.9.1987	- 9.0
43	GREGORY	KN00009	A	21.2.1947	3.9.1987	- 120.0
				13.3.1986	1.9.1990	- 25.0
44	HEIM	KN00012	A	21.2.1947	3.9.1987	- 9.0
45	JOSEPH	KN00003	A	21.2.1947	3.9.1987	- 250.0
46	KRAPF	KN00001	A	1899	21.2.1947	- 150.0
47	LEWIS	KN00008	A	1.5.1934	21.2.1947	- 130.0
				1.1.1974	13.2.1978	- 25.0
				21.2.1947	3.9.1987	- 245.0
48	MELHUISH	KN00014	A	21.2.1947	3.9.1987	- 220.0
49	NORTHEY	KN00013	A	21.2.1947	3.9.1987	- 230.0
50	TYNDALL	KN00005	A	1899	21.2.1947	- 250.0
				21.2.1947	3.9.1987	- 70.0
	POLAND					
51	POD BULA	PL00111	C	9.9.1980	26.9.1981	- 32.6
				26.9.1981	25.9.1982	- 7.0
				25.9.1982	10.10.1983	13.0

NR	GLACIER NAME	PSFG NR	METHOD	1ST SURVEY D M Y	2ND SURVEY D M Y	VARIATIONS METERS
				10.10.1983	30.9.1984	- .3
				30.9.1984	30.9.1985	- 20.7
				30.9.1985	29.9.1986	24.3
				29.9.1986	10.10.1987	- 10.3
				10.10.1987	25.9.1988	17.7
				25.9.1988	8.10.1989	3.3
				8.10.1989	27.9.1990	- 33.0
	C.I.S.					
52	DZHELO	SU07106	C	6.9.1985	1986	- X
				1986	1987	- X
				1987	3.9.1988	- 50.7
				3.9.1988	6.9.1989	- 19.6
				6.9.1989	3.9.1990	- 8.7
53	LEVIY KARAGEMSK	SU07107	C	6.9.1985	2.9.1986	- 19.0
				2.9.1986	5.9.1987	1.1
				5.9.1987	3.9.1988	- 12.6
				3.9.1988	6.9.1989	- 11.0
				6.9.1989	5.9.1990	- 8.7
54	MIZHIRGICHIRAN	SU03043	C	6.9.1989	7.9.1990	12.9
55	MURAVLEV	SU06002	C	3.9.1989	26.8.1990	- 3.3
56	NO. 122 (UNIV.)	SU07108	C	6.9.1985	2.9.1986	- 15.6
				2.9.1986	5.9.1987	- 6.4
				5.9.1987	3.9.1988	- 4.9
				3.9.1988	6.9.1989	- 5.5
				6.9.1989	5.9.1990	- 13.1
57	PRAVIY KARAGEMS	SU07109	C	6.9.1985	2.9.1986	- 18.6
				2.9.1986	5.9.1987	- .5
				5.9.1987	3.9.1988	2.3
				3.9.1988	5.9.1990	- 7.5
58	SHUMSKIY	SU06001	C	8.9.1989	27.8.1990	- 9.4
	PAKISTAN					
59	ALING	PK00035		1970	1989	- X
60	BUALTAR	PK00004		1939	1988	+ X
	NEPAL					
61	THULAGI	NP00013	A	1958	1.11.1972	- 50.0
				1.11.1972	1.11.1977	- 50.0
				1.11.1977	1.11.1984	- 150.0
				1.11.1984	1.11.1988	- 850.0

Notes

WORLD GLACIER MONITORING SERVICE

MASS BALANCE STUDY RESULTS SUMMARY DATA 1990-95

TABLE C

NR	Record number
GLACIER NAME	15 alphabetic or numeric digits
PSFG NUMBER	5 digits identifying glacier with alphabetic prefix denoting country
SYS	System of measurement: STR = Stratigraphic FXD = Fixed date COM = Combined System OTH = Other System
FROM	Day, month and year of beginning of balance/measurement year
TO	Day, month and year of end of balance/measurement year
BW	Mean specific winter balance in mm water equivalent
BS	Mean specific summer balance in mm water equivalent
BN/BA	Mean specific net balance or annual balance in mm water equivalent
ELA	Altitude of equilibrium line or annula equilibrium line in meters above sea level
AAR	Ratio of accumulation area to total area of the glacier in percent
AREA	Area of the glacier used for calculation of mean specific quantities

NR	GLACIER NAME	PSFG NR	SYS	FROM D M Y	TO D M Y	BW MM	BS MM	BN/BA MM	ELA M	AAR %	AREA KM²
	CANADA										
1	BABY GLACIER	CD00205	STR	1990	1991			-176			0.613
				1991	1992			-86			0.613
2	DEVON ICE CAP	CD00431	STR	1990	1991	84	-314	-230	1270		1667.6
				1991	1992	139	-43	96	825		1667.6
				1992	1993	103	-165	-62	1150		1667.6
				1993	1994	62	-94	-32	1025		1667.6
				1994	1995	87	-234	-147	1143		1667.6
3	HELM	CD00855	STR	1990	1991			-2239	2138	8	0.92
				1991	1992			-2798	2179	0	0.92
				1992	1993			-2342	2179	0	0.92
				1993	1994			-1885	2179	0	0.92
				1994	1995			-1465	2179	0	0.92
4	PEYTO	CD01640	STR	1992	1993	705	-1920	-1215	2842	14	11.74
				1993	1994	940	-2235	-1295	2754	28	11.74
				1994	1995	1105	-1405	-300	2675	43	11.74
5	PLACE	CD01660	STR	1990	1991			-990	2280	23	3.45
				1991	1992			-793	2250	25	3.45
				1992	1993			-2280	2460	2	3.45
				1993	1994	1601	-3611	-2010	2445	4	3.45
				1994	1995	1143	-3629	-2486	2602	0	3.45
6	WHITE	CD02340	COM	1990	1991			-179	1168	50	38.5
				1991	1992			-295	1389	16	38.5
				1992	1993			-480	1432	12	38.5
				1993	1994			-314	1325	28	
				1994	1995			-362	1204	46	
	U.S.A.										
7	GULKANA	US00200	COM	1.10.1990	30.9.1991			-190	1708	64	19.3
				1.10.1991	30.9.1992			-330	1755	59	19.3
				1.10.1992	30.9.1993			-1840	1878	43	19.3
				1.10.1993	30.9.1994			-640	1769	57	19.3
				1.10.1994	30.9.1995			-1070	1824	50	19.3
8	MCCALL	US00001	STR	1.10.1992	30.9.1993			-480	2180	19	7.23
				1.10.1993	30.9.1994			-740	2116	20	7.23
				1.10.1994	30.9.1995			-550	2270	10	7.23
9	NOISY CREEK	US02078	STR	31.10.1992	24.9.1993	2030	-2982	-952	1929	0	0.58
				24.9.1993	3.10.1994	2528	-3589	-1163	1929	9	0.58
				3.10.1994	5.10.1995	3486	-3594	-108	1817	67	0.58
10	NORTH KLAWATTI	US02076	STR	31.10.1992	24.9.1993	1760	-2829	-1069	2243	45	1.46
				24.9.1993	3.10.1994	2104	-4031	-1926	2400	0	1.46
				3.10.1994	14.10.1995	3071	-3542	-470	2135	66	1.46
11	SANDALEE	US02079	STR	31.10.1994	14.10.1995	3053	-2688	365	2072	84	0.19
12	SILVER	US02077	STR	31.10.1992	24.9.1993	1528	-1584	-57	2237	71	0.41

NR	GLACIER NAME	PSFG NR	SYS	FROM D M Y	TO D M Y	BW MM	BS MM	BN/BA MM	ELA M	AAR %	AREA KM²
				24.9.1993	3.10.1994	1709	-1894	-185	2313	34	0.41
				3.10.1994	14.10.1995	2436	-2000	436	2237	54	0.41
13	SOUTH CASCADE	US02013	STR	12.11.1990	15.10.1991	3350	-3550	-200	1860	75	2.1
				15.10.1991	6.11.1992	1910	-3920	-2010	2020	8	2.09
				6.11.1992	31.10.1993	1980	-3210	-1230	1986	17	2.08
				31.10.1993	13.10.1994	2390	-3410	-1020	2005	11	2.05
				13.10.1994	14.10.1995	2860	-3550	-690	1945	23	2.03
14	WOLVERINE	US00411	COM	1.10.1990	30.9.1991			-580	1196	61	17.24
				1.10.1991	30.9.1992			-190	1160	65	17.24
				1.10.1992	30.9.1993			-590	1146	66	17.24
				1.10.1993	30.9.1994			-680	1201	61	17.24
				1.10.1994	30.9.1995			-480	1185	62	17.24
	ECUADOR										
15	ANTIZANA15ALPHA	EC00001	FXD	1.1.1995	31.12.1995			-1880	5370	35	0.353
	BOLIVIA										
16	CHACALTAYA	RB05180	FXD	1.9.1991	1.9.1992			-1166	5371	0	0.1
				1.9.1992	1.9.1993			277	5180	83	0.1
				1.9.1993	1.9.1994			-1080	5359	3	0.1
				1.9.1994	1.9.1995			-1470	5368	2	0.1
17	ZONGO	RB05150	FXD	1.9.1991	1.9.1992			-1498	5460	41	2.18
				1.9.1992	1.9.1993			163	5100	86	2.18
				1.9.1993	1.9.1994			-736	5300	58	2.18
				1.9.1994	1.9.1995			-1276	5420	45	2.18
	ICELAND										
18	BRUARJOKULL	IS02400		1993	1994			550	1140	67	
				1994	1995			-342	1260	52	
19	DYNGJUJOKULL	IS02600		1993	1994			190	1250	71	
				1994	1995			20	1310	60	
20	EYJABAKKAJOKULL	IS02300		1993	1994			460	1045	61	
				1994	1995			-420	1145	44	
21	HOFSJOKULL E	IS0510B		1990	1991			-990	1235	45	
				1991	1992			1610	1000	72	
				1992	1993			1110	1070	63	
				1993	1994			-180	1155	59	
				1994	1995			-800	1285	47	
22	HOFSJOKULL N	IS0510A		1990	1991			-1410	1485	19	
				1991	1992			1060	1160	67	
				1992	1993			910	1165	64	
				1993	1994			80	1250	50	
				1994	1995			-680	1330	38	
23	HOFSJOKULL SW	IS0510C		1990	1991			-1490	1335	29	

NR	GLACIER NAME	PSFG NR	SYS	FROM D M Y	TO D M Y	BW MM	BS MM	BN/BA MM	ELA M	AAR %	AREA KM²
				1991	1992			1190	1190	52	
				1992	1993			130	1235	45	
				1993	1994			-740	1310	34	
				1994	1995			-1170	1345	27	
24	KOELDUKVISLARJ.	IS02700		1994	1995			-590	1410	48	
25	THRANDARJOKULL	IS01940		1993	1994			400	1020	74	
				1994	1995			-990	1240	0	
26	TUNGNAARJOKULL	IS02214		1993	1994			-140	1160	53	
	NORWAY										
27	AALFOTBREEN	N36204	OTH	20.10.1990	27.10.1991	4090	-3300	790	1035	94	4.8
				27.10.1991	28.10.1992	5480	-3190	2290	1055	91	4.8
				28.10.1992	15.10.1993	4810	-2740	2070	860	100	4.8
				15.10.1993	20.10.1994	3710	-2920	780	925	100	4.8
				20.10.1994	4.11.1995	5100	-3900	1200	1120	80	4.8
28	AU.BROEGGERBR.	N15504	FXD	15.9.1990	15.9.1991	920	-790	130	275	58	6.12
				15.9.1991	15.9.1992	690	-890	-200	340	39	6.12
				15.9.1992	15.9.1993	540	-1570	-1030	600	0	6.12
				15.9.1993	15.9.1994	790	-950	-160	310	48	6.12
				15.9.1994	15.9.1995	560	-1340	-780	500	8	6.12
29	AUSTDALSBREEN	N37323	OTH	11.10.1990	28.9.1991	1640	-1640	0	1435	67	11.9
				28.9.1991	20.9.1992	2800	-2260	540	1375	80	11.9
				20.9.1992	14.9.1993	2600	-1690	910	1320	87	11.9
				14.9.1993	20.9.1994	1810	-1880	-70	1425	69	11.8
				20.9.1994	30.9.1995	2720	-2100	620	1360	80	11.8
30	ENGABREEN	N67011	OTH	30.9.1990	30.9.1991	2830	-2140	690	1090	75	38
				30.9.1991	13.9.1992	4050	-1410	2340	875	94	38
				13.9.1992	23.9.1993	3060	-2020	1040	985	87	38
				23.9.1993	16.9.1994	1950	-1530	420	1075	77	38
				16.9.1994	15.9.1995	3500	-1760	1740	940	90	38
31	GRAASUBREEN	N00547	OTH	23.9.1990	4.10.1991	670	-1190	-520	2195	10	2.2
				4.10.1991	15.9.1992	700	-800	-100		22	2.2
				15.9.1992	20.9.1993	930	-510	420	1850	100	2.2
				20.9.1993	13.10.1994	1160	-1160	0	2075	45	2.2
				13.10.1994	17.9.1995	1190	-1300	-110	2170	16	2.2
32	HANSBREEN	N12419	STR	10.9.1990	17.9.1991	1160	-1030	130	280	54	56.76
				17.9.1991	28.9.1992	890	-1160	-270	380	27	56.76
				28.9.1992	11.11.1993	930	-1610	-680	400	22	56.76
				11.11.1993	12.10.1994	760	-560	200	240	69	56.76
				12.10.1994	12.10.1995	760	-1210	-450	390	25	56.76
33	HANSEBREEN	N36206		1990	1991	3451	-2536	915			3.323
				1991	1992	4406	-3432	974			3.323
				1992	1993	4233	-3019	1214			3.323
				1993	1994	3393	-2967	426			3.323

NR	GLACIER NAME	PSFG NR	SYS	FROM D M Y	TO D M Y	BW MM	BS MM	BN/BA MM	ELA M	AAR %	AREA KM²
				1994	1995	4382	-3901	481			3.323
34	HARDANGERJOEKUL	N22303	OTH	1.9.1990	14.10.1991	1520	-1610	-90	1660	75	17.2
				14.10.1991	17.9.1992	3510	-1720	1790	1525	88	17.2
				17.9.1992	9.9.1993	2820	-910	1910	1450	92	17.2
				9.9.1993	10.10.1994	1790	-1630	160	1605	83	17.2
				10.10.1994	6.9.1995	2440	-2140	300	1575	85	17.2
35	HELLSTUGUBREEN	N00511	OTH	16.9.1990	2.10.1991	980	-1430	-450	1950	30	3
				2.10.1991	17.9.1992	1170	-1030	140	1850	61	3
				17.9.1992	19.9.1993	1250	-950	300	1670	83	3
				19.9.1993	11.10.1994	1260	-1190	70	1860	60	3
				11.10.1994	14.9.1995	1420	-1540	-120	1885	51	3
36	KONGSVEGEN	N15510	FXD	15.9.1990	15.9.1991	880	-450	430	450	73	101.9
				15.9.1991	15.9.1992	920	-600	320	475	68	101.9
				15.9.1992	15.9.1993	740	-1120	-380	670	25	101.9
				15.9.1993	15.9.1994	1000	-500	500	400	78	101.9
				15.9.1994	15.9.1995	640	-890	-350	650	28	101.9
37	LANGFJORDJOEKUL	N85008	OTH	5.9.1990	4.10.1991	2310	-2230	80	680	67	4.8
				4.10.1991	22.9.1992	2760	-2480	280	700	64	4.8
				22.9.1992	24.9.1993	2470	-2390	80	700	64	4.8
38	M.LOVENBREEN	N15506	FXD	15.9.1990	15.9.1991	980	-880	100	265	68	5.45
				15.9.1991	15.9.1992	840	-980	-140	375	40	5.45
				15.9.1992	15.9.1993	680	-1560	-880	600	0	5.45
				15.9.1993	15.9.1994	860	-1000	-120	270	66	5.45
				15.9.1994	15.9.1995	520	-1310	-790	500	6	5.45
39	NIGARDSBREEN	N31014	OTH	19.10.1990	28.9.1991	1950	-1750	200	1510	73	47.8
				28.9.1991	18.9.1992	3160	-1560	1600	1360	89	47.8
				18.9.1992	16.9.1993	3130	-1280	1850	1300	92	47.8
				16.9.1993	21.9.1994	2280	-1720	560	1400	87	47.8
				21.9.1994	30.9.1995	3160	-1970	1190	1320	91	47.8
40	OKSTINDBREEN	N64902	OTH	16.9.1990	11.9.1991	1790	-2300	-510	1315	60	14
				11.9.1991	13.9.1992	2880	-1650	1230	1260	73	14
				13.9.1992	20.9.1993	2200	-2010	190	1290	66	14
				20.9.1993	20.9.1994	1450	-1620	-170	1300	63	14
				20.9.1994	19.9.1995	2250	-1790	460	1275	68	14
41	SPOERTEGGBREEN	N31027	OTH	1.10.1990	30.9.1991	1400	-1370	30	1540	62	27.9
42	STORBREEN	N00541	OTH	15.9.1990	15.9.1991	1260	-1410	-150	1740	57	5.3
				15.9.1991	14.10.1992	1610	-1530	150	1720	61	5.3
				14.10.1992	17.9.1993	1810	-1060	750	1610	92	5.3
				17.9.1993	10.10.1994	1520	-1770	-250	1800	40	5.3
				10.10.1994	13.9.1995	1770	-1930	-160	1815	34	5.3
43	STORSTEINSFJELL	N07381	OTH	1990	1991	1560	-1600	-40	1395	42	5.9
				1991	1992	2070	-1030	1040	1200	87	5.9
				1992	1993	2170	-1220	950	1200	87	5.9
				1993	1994	1140	-1350	-210	1375	51	5.9

NR	GLACIER NAME	PSFG NR	SYS	FROM D M Y	TO D M Y	BW MM	BS MM	BN/BA MM	ELA M	AAR %	AREA KM²
				18.9.1994	13.9.1995	1810	-1240	570	1280	74	5.9
44	SVARTISHEIBREEN	N65509	OTH	30.9.1990	30.9.1991	2610	-2440	170	950	70	5.5
				30.9.1991	12.9.1992	3890	-2680	1210	885	81	5.5
				12.9.1992	29.9.1993	3500	-2590	910	880	81	5.5
				29.9.1993	15.9.1994	1830	-1850	-20	975	65	5.5
				15.9.1994	15.9.1995			800	920	76	5.5
45	TROLLBERGDALSBR	N68507	OTH	30.9.1990	30.9.1991	2325	-2325	0	1070	38	1.8
				30.9.1991	12.9.1992	2650	-2050	600	900	100	1.8
				12.9.1992	25.9.1993	2520	-2310	210	1050	50	1.8
				25.9.1993	16.9.1994	1490	-2590	-1100	1180	5	1.8
	SWEDEN										
46	KARSOJIETNA	S00798	FXD	4.5.1990	21.8.1991	1860	-1790	70	1144	55	1.23
				10.5.1991	15.9.1992	2260	-1390	870	1012	91	1.23
				31.5.1992	19.8.1993	2320	-1350	970	960	99	1.23
47	MARMAGLACIAEREN	S00799	FXD	21.5.1990	20.8.1991	1150	-1390	-240	1624	21	3.9
				23.5.1991	2.9.1992	1310	-1220	90	1539	51	3.9
				9.4.1992	26.8.1993	1300	-1030	270	1533	54	3.9
				26.5.1993	4.9.1994	820	-1160	-340	1619	23	3.9
				20.5.1994	3.9.1995	1110	-1010	100	1521	59	3.9
48	RABOTS GLACIAER	S00785	COM	8.5.1990	22.8.1991	1508	-1710	-202	1358	49	3.82
				14.5.1991	3.9.1992	1650	-1540	110	1332	61	3.82
				28.5.1992	27.8.1993	1860	-1350	510	1347	57	3.82
				5.5.1993	20.9.1994	910	-1010	-100	1350	57	3.88
				26.5.1994	10.9.1995	1450	-1370	80	1351	57	3.88
49	RIUKOJIETNA	S00790	FXD	14.5.1990	20.8.1991			80	1350	60	4.2
				22.4.1991	1.9.1992	2120	-1533	586	1130	82	4.2
				9.5.1992	24.8.1993	2180	-1830	350	1300	87	4.2
				26.5.1993	6.9.1994	1003	-1298	-295	1410	26	4.2
				9.5.1994	9.9.1995	1452	-1199	253	1287	85	4.2
50	STORGLACIAEREN	S00788	COM	21.5.1990	9.9.1991	1680	-1510	170	1460	47	3.01
				23.5.1991	3.9.1992	2235	-1356	880	1397	57	3.01
				22.5.1992	10.9.1993	2250	-1250	1000	1397	58	3.12
				26.5.1993	10.9.1994	1060	-1430	-370	1500	41	3.1
				23.5.1994	12.9.1995	1930	-1230	700	1400	57	3.1
51	TARFALAGLACIAEREN	S00791	COM	18.5.1990	10.9.1991	1950	-1790	160	1450	63	0.86
				25.5.1991	9.9.1992	2470	-1110	1360	1390	100	0.86
	FRANCE										
52	SAINT SORLIN	F00015	COM	7.9.1990	5.9.1991			-1150			3
				5.9.1991	5.10.1992			-690			3
				5.10.1992	11.9.1993			-780			3
				11.9.1993	1.9.1994			-340			3
				1.9.1994	20.10.1995			750			3

NR	GLACIER NAME	PSFG NR	SYS	FROM D M Y	TO D M Y	BW MM	BS MM	BN/BA MM	ELA M	AAR %	AREA KM²
53	SARENNES	F00029	COM	26.9.1990	30.9.1991	1810	-3010	-1200			0.5
				30.9.1991	1.10.1992	1360	-2670	-1310			0.5
				1.10.1992	9.9.1993	1750	-2950	-1200			0.5
				9.9.1993	3.10.1994	2150	-2780	-630			0.5
				3.10.1994	18.10.1995	2790	-2030	760			0.5
	<u>SWITZERLAND</u>										
54	GRIES (AEGINA)	CH00003	FXD	1990	1991			-1100	3264	1	6.194
				1991	1992			-720	3028	33	6.194
				1992	1993			-30	2839	63	6.194
				1993	1994			-500	2953	48	6.194
				1994	1995			160	2799	67	6.194
55	GROSSER ALETSCH	CH00005	FXD	1.10.1990	30.9.1991			-616			127.35
				1.10.1991	30.9.1992			-674			127.32
				1.10.1992	30.9.1993			92			127.3
				1.10.1993	30.9.1994			-449			127.28
				1.10.1994	30.9.1995			-965			126.99
56	SILVRETTA	CH00090	FXD	1990	1991			-1180	3078	2	3.15
				1991	1992			-830	2966	14	3.15
				1992	1993			-230	2787	49	3.15
				1993	1994			-670	2912	24	3.15
				1994	1995			200	2704	70	3.15
	<u>AUSTRIA</u>										
57	HINTEREIS F.	A00209	FXD	1.10.1990	30.9.1991			-1325		18	8.884
				1.10.1991	30.9.1992			-1120	3155	24	8.878
				1.10.1992	30.9.1993			-573	3050	49	8.754
				1.10.1993	30.9.1994			-1107	3145	31	8.737
				1.10.1994	30.9.1995			-461	3080	53	8.725
58	JAMTAL F.	A00106	FXD	1.10.1990	30.9.1991	780	-2220	-1440		10	3.846
				1.10.1991	30.9.1992	1450	-2680	-1230		7	3.846
				1.10.1992	30.9.1993	1280	-1650	-370	2860	44	3.846
				1.10.1993	30.9.1994	1300	-2120	-830		18	3.846
				1.10.1994	30.9.1995	1430	-1590	-146	2820	63	3.798
59	KESSELWAND F.	A00226	FXD	1.10.1990	30.9.1991			-849		21	4.432
				1.10.1991	30.9.1992			-414	3160	51	4.43
				1.10.1992	30.9.1993			-75	3105	72	4.406
				1.10.1993	30.9.1994			-828	3240	33	4.373
				1.10.1994	30.9.1995			144	3080	78	4.291
60	OCHSENTALERGL.	A00103	FXD	1.10.1990	30.9.1991			-705	2920	42	2.643
				1.10.1991	30.9.1992	1540	-2660	-1120		21	2.642
				1.10.1992	30.9.1993	1340	1530	-190	2865	60	2.638
				1.10.1993	30.9.1994	1480	-2460	-980	2990	34	2.629
				1.10.1994	30.9.1995	1540	-1490	50	2845	63	2.614

NR	GLACIER NAME	PSFG NR	SYS	FROM	TO	BW	BS	BN/BA	ELA	AAR	AREA
				D M Y	D M Y	MM	MM	MM	M	%	KM^2
61	SONNBLICK K.	A0601A	STR	2.9.1990	30.9.1991			-818	2885	22	1.57
				1.10.1991	30.9.1992			-2092	2975	3	1.55
				1.10.1992	30.9.1993			-315	2780	44	1.54
				26.9.1993	2.10.1994			-1385	2950	9	1.5
				3.10.1994	27.8.1995			142	2720	70	1.5
62	VERMUNTGL.	A00104	FXD	1.10.1990	30.9.1991	870	-2360	-1490		3	2.24
				1.10.1991	30.9.1992	1190	-2540	-1350		0	2.24
				1.10.1992	30.9.1993	1100	-1670	-570	2950	20	2.24
				1.10.1993	30.9.1994	1130	-2580	-1450		4	2.24
				1.10.1994	30.9.1995	1300	-1540	-240	2845	41	2.24
63	VERNAGT F.	A00211	FXD	1.10.1990	30.9.1991			-1080		8	9.09
				1.10.1991	30.9.1992			-858	3270	22	9.09
				1.10.1992	30.9.1993			-472	3225	37	9.09
				1.10.1993	30.9.1994			-1028		22	9.09
				1.10.1994	30.9.1995			-400	3226	40	9.09
64	WURTEN K.	A00804	FXD	1.10.1990	30.9.1991	1258	-2152	-894	3070	16	1.108
				1.10.1991	30.9.1992	1550	-2798	-1248		7	1.094
				1.10.1992	30.9.1993	1513	-1997	-484	3020	15	1.094
				1.10.1993	30.9.1994	1422	-3039	-1617	3170	5	1.094
				1.10.1994	30.9.1995	1545	-1958	-414	2940	32	1.094
	ITALY										
65	CARESER	I00701	FXD	7.10.1990	10.10.1991			-1730	3463	0	3.857
				11.10.1991	15.10.1992			-1200	3315	0	3.857
				16.10.1992	23.8.1993			-300	3148	14	3.857
				24.8.1993	7.10.1994			-1740	3380	19	3.857
				8.10.1994	15.10.1995			-1080	3469	0	3.857
66	CIARDONEY	I00081	FXD	1.10.1991	21.9.1992	1000	-1860	-860	3110	13	0.9
				22.9.1992	16.9.1993	2400	-2730	-330	3050	34	0.9
				17.9.1993	16.9.1994	1280	-2280	-1000	3130	11	0.9
				17.9.1994	29.9.1995	1180	-1660	-480	3080	34	0.9
67	FONTANA BIANCA	I00713	FXD	1.10.1991	30.9.1992	844	-1935	-1091	3443	10	0.663
				1.10.1992	30.9.1993	968	-1524	-556	3443	13	0.662
				1.10.1993	30.9.1994	1375	-2330	-955	3443	19	0.656
				1.10.1994	30.9.1995	503	-1185	-682	3443		0.656
68	SFORZELLINA	I00516	FXD	24.9.1990	27.9.1991			-1210	3025	0	0.42
				28.9.1991	19.9.1992			-770	2980	26	0.42
				20.9.1992	18.9.1993			-286	2960	30	0.42
				19.9.1993	21.9.1994			-712	2975	28	0.42
				22.9.1994	19.9.1995			-728	3000	14	0.42
	SPAIN										
69	MALADETA	E09020	FXD	1.10.1991	30.9.1992	1682	-2009	-327	3090	26	0.5
				1.10.1992	30.9.1993	2127	-2164	-37	3066	35	0.5

NR	GLACIER NAME	PSFG NR	SYS	FROM D M Y	TO D M Y	BW MM	BS MM	BN/BA MM	ELA M	AAR %	AREA KM^2
				1.10.1993	15.8.1994	1975	-1624	351	3028	49	0.5
				16.8.1994	26.8.1995	1976	-2619	-643	3075	31	0.5
	<u>KENYA</u>										
70	LEWIS	KN00008	FXD	1.3.1990	1.3.1991			-810		0	0.23
				1.3.1991	1.3.1992			-1750		0	0.23
				1.3.1992	1.3.1993			-480	4790	1	0.23
				1.3.1993	1.3.1994			-1900		0	0.2
				1.3.1994	1.3.1995			-450	4810	1	0.2
	<u>C.I.S.</u>										
71	ABRAMOV	SU04101	FXD	1.10.1990	30.9.1991	1290	-1720	-430	4220	46	25.89
				1.10.1991	30.9.1992	1620	-1220	400	4110	68	25.87
				1.10.1992	30.9.1993	1640	-1340	300	4120	66	25.89
				1.10.1993	30.9.1994	1610	-2360	-750	4250	44	25.85
				1.10.1994	30.9.1995	1120	-1900	-780	4240	46	25.84
72	DJANKUAT	SU03010	STR	12.10.1990	23.10.1991	2480	-2790	-310	3240	56	3.13
				23.10.1991	19.9.1992	1950	-2080	-130	3220	60	3.13
				19.9.1992	22.10.1993	3180	-2080	1100	3020	79	3.1
				22.10.1993	13.10.1994	2070	-2910	-840	3320	45	3.1
				13.10.1994	23.9.1995	2540	2500	40	3200	61	3.1
73	GARABASHI	SU03031	STR	5.9.1990	2.9.1991	1110	-1140	-30	3850	54	4.47
				2.9.1991	13.9.1992	930	-790	140	3780	66	4.47
				13.9.1992	19.9.1993	1050	-740	310	3630	75	4.47
				19.9.1993	25.9.1994	1010	-1440	-430	3890	48	4.47
				25.9.1994	17.9.1995	1010	-1020	-10	3850	55	4.47
74	GOLUBIN	SU05060	STR	2.10.1990	25.9.1991	597	-1170	-573	3850	67	6.21
				25.9.1991	22.9.1992	645	-1099	-454	3830	63	5.75
				22.9.1992	22.9.1993	509	-785	-276	3810	63	5.75
				22.9.1993	20.9.1994	673	-1174	-501	3750	73	5.75
75	KARA-BATKAK	SU05080	OTH	20.9.1990	1.9.1991			-398	3900	51	4.19
				1.9.1991	28.8.1992			-352	3830	61	4.19
				28.8.1992	3.9.1993			-185	3810	68	4.19
				3.9.1993	20.9.1994			-505	3900	51	4.19
				20.9.1994	10.9.1995			-515	3850	54	4.19
76	KOZELSKIY	SU08005	STR	18.9.1990	15.9.1991	3250	-2790	460	1280	67	1.8
				16.9.1991	13.10.1992	3060	-3470	-410	1635	45	1.8
				14.10.1992	23.9.1993	2740	-3090	-350	1620	47	1.8
				24.9.1993	10.10.1994	3480	-4150	-670	1675	37	1.8
				11.10.1994	4.10.1995	2740	-2970	-230	1620	45	1.79
77	LEVIY AKTRU	SU07102	STR	9.9.1990	30.8.1991	510	-990	-480	3290	52	5.95
				31.8.1991	2.9.1992	530	-720	-190	3240	56	5.95
				3.9.1992	5.9.1993	820	-580	240	3070	72	5.95
				6.9.1993	28.8.1994	630	-990	-360	3250	56	5.95

NR	GLACIER NAME	PSFG NR	SYS	FROM D M Y	TO D M Y	BW MM	BS MM	BN/BA MM	ELA M	AAR %	AREA KM²
				29.8.1994	26.8.1995	910	-940	-30	3130	67	5.95
78	MALIY AKTRU	SU07100	STR	11.9.1990	30.8.1991	560	-1100	-540	3340	39	2.73
				31.8.1991	2.9.1992	530	-700	-170	3230	67	2.73
				3.9.1992	5.9.1993	900	-560	340	3180	76	2.73
				6.9.1993	30.8.1994	610	-760	-150	3230	67	2.73
				31.8.1994	27.8.1995	810	-630	180	3200	75	2.73
79	NO.125 (VODOP.)	SU07105	STR	30.8.1990	21.8.1991	300	-720	-420	3480	15	0.75
				22.8.1991	25.8.1992	200	-220	-20	3220	72	0.75
				26.8.1992	26.8.1993	360	-260	100	3170	80	0.75
				27.8.1993	27.8.1994	310	-520	-210	3240	68	0.75
				28.8.1994	25.8.1995	350	-300	50	3210	72	0.75
80	NO.131	SU05081	OTH	1990	1991			-502	4200	37	0.51
81	SHUMSKIY	SU06001	FXD	10.9.1990	9.9.1991	318	-1419	-1101	3825	24	2.81
82	SUYOK ZAPADNIY	SU05082	OTH	1990	1991			-527	4300	22	1.25
83	TS.TUYUKSUYSKIY	SU05075	STR	2.10.1990	27.9.1991	270	-1370	-1100	3950	28	2.72
				27.9.1991	20.9.1992	550	-790	-240	3800	38	2.68
				20.9.1992	21.8.1993	585	17	602	3632	80	2.68
				21.8.1993	16.9.1994	570	-1013	-443	3790	44	2.67
				16.9.1994	26.9.1995	279	-866	-587	3870	31	2.66
	CHINA										
84	URUMQIHE E-BR.	CN00010	FXD	31.8.1990	31.8.1991			-734	4110	25	1.163
				31.8.1991	31.8.1992			15	3918	69	1.163
				31.8.1992	3.9.1993			-34	3932	69	1.163
				3.9.1993	31.8.1994			-384	4037	37	1.163
				31.8.1994	31.8.1995			-225	4021	49	1.163
85	URUMQIHE S.NO.1	CN00010	FXD	31.8.1990	31.8.1991	1215		-706	4130	30	1.84
				31.8.1991	31.8.1992	173		23	3975	68	1.84
				31.8.1992	3.9.1993	-13		-29	3980	69	1.84
				3.9.1993	31.8.1994	45		-378	4058	40	1.84
				31.8.1994	31.8.1995	230		-228	4035	50	1.84
86	URUMQIHE W-BR.	CN00010	FXD	31.8.1990	31.8.1991			-657	4150	41	0.677
				31.8.1991	31.8.1992			37	4032	67	0.677
				31.8.1992	3.9.1993			-20	4028	69	0.677
				3.9.1993	31.8.1994			-367	4079	46	0.677
				31.8.1994	31.8.1995			-233	4049	53	0.677
87	XIAO DONGKZMADI	CN00038	FXD	1.9.1990	31.8.1991			-191	5695	42	1.767
				31.8.1991	1.9.1992			376	5550	90	1.767
				1.9.1992	31.8.1993			211	5505	80	1.767
	JAPAN										
88	HAMAGURI YUKI	J00001	FXD	9.10.1990	6.10.1991	8856	-9489	-633			0.001
				8.10.1992	8.10.1993	11491	-11159	332			0.003
				8.10.1993	9.10.1994	5257	-4834	423			0.003

Notes

WORLD GLACIER MONITORING SERVICE

MASS BALANCE STUDY RESULTS SUMMARY DATA

TABLE CC

ADDENDA FROM EARLIER YEARS

NR	Record number
GLACIER NAME	15 alphabetic or numeric digits
PSFG NUMBER	5 digits identifying glacier with alphabetic prefix denoting country
SYS	System of measurement: STR = Stratigraphic FXD = Fixed date COM = Combined System OTH = Other System
FROM	Day, month and year of beginning of balance/measurement year
TO	Day, month and year of end of balance/measurement year
BW	Mean specific winter balance in mm water equivalent
BS	Mean specific summer balance in mm water equivalent
BN/BA	Mean specific net balance or annual balance in mm water equivalent
ELA	Altitude of equilibrium line or annula equilibrium line in meters above sea level
AAR	Ratio of accumulation area to total area of the glacier in percent
AREA	Area of the glacier used for calculation of mean specific quantities

NR	GLACIER NAME	PSFG NR	SYS	FROM D M Y	TO D M Y	BW MM	BS MM	BN/BA MM	ELA M	AAR %	AREA KM²
	<u>CANADA</u>										
1	BABY GLACIER	CD00205	STR	1959	1960			-878		0	0.613
				1960	1961			106			0.613
				1961	1962			-979		0	0.613
				1962	1963			-150			0.613
				1963	1964			250			0.613
				1964	1965			150	930	82	0.613
				1965	1966			70	940	79	0.613
				1966	1967			210	885	92	0.613
				1967	1968			-506	1130	2	0.613
				1968	1969	300	-160	140	933	81	0.613
				1969	1970	240	130	110	925	84	0.613
				1970	1971			-476	1113	1	0.613
				1971	1972			321		100	0.613
				1972	1974			132			0.613
				1974	1975			319		100	0.613
				1975	1976			149	930		0.613
				1989	1990			-352			0.613
2	DEVON ICE CAP	CD00431	OTH	1960	1961	109	-306	-197	1300	33	
				1961	1962	97	-456	-359	1400	22	
				1962	1963	150	-106	44	890	82	
				1963	1964	115	10	125	620	94	
				1964	1965	87	-23	64	730	90	
				1965	1966	104	-239	-135	1220	47	
				1966	1967	151	-178	-27	1070	64	
				1967	1968	112	-287	-175			
				1968	1969	115	-290	-175			
				1969	1970	115	-76	39	910	81	
				1970	1971	120	-189	-69	1160	52	
				1971	1972	116	-14	102	870	83	
				1972	1973	106	-201	-95	1190	50	
				1973	1974	110	-187	-77	1200	49	
				1974	1975	94	-163	-69	1110	58	
				1975	1976	111	65	176			1695.1
				1976	1977	134	-233	-99			1695.1
				1977	1978	107	-80	27			1695.1
				1978	1979	101	-62	39			1695.1
				1979	1980	101	-158	-57			1695.1
				1980	1981	115	-261	-146	1300		1695.1
				1981	1982	108	-203	-95	1230		1695.1
				1982	1983	147	-42	105	840		1695.1
				1983	1984	127	-158	-31	1150		1695.1
				1984	1985	137	-245	-108	1200		1695.1
				1985	1986	104	-81	23	683		1667.6

NR	GLACIER NAME	PSFG NR	SYS	FROM D M Y	TO D M Y	BW MM	BS MM	BN/BA MM	ELA M	AAR %	AREA KM²
				1986	1987	144	-100	44	1000		1667.6
				1987	1988	86	-302	-216	1228		1667.6
				1988	1989	113	-182	-69	1142		1667.6
				1989	1990	144	-310	-166	1226		1667.6
3	WHITE	CD02340	FXD	1959	20.8.1960			-404	1261	40	38.5
				20.8.1960	3.8.1961			23	931	74	38.5
				3.8.1961	22.8.1962			-781	1371	20	38.5
				22.8.1962	25.8.1963			-154	1171	50	38.5
				25.8.1963	22.8.1964			350	480	91	38.5
				22.8.1964	25.8.1965			-9	886	77	38.5
				25.8.1965	26.8.1966			-22	996	69	38.5
				26.8.1966	23.8.1967			121	828	80	38.5
				23.8.1967	25.8.1968			-406	1225	43	38.5
				25.8.1968	22.8.1969			74	908	76	38.5
				22.8.1969	20.8.1970			-4	953	73	38.5
				20.8.1970	22.8.1971			-184	1107	59	38.5
				22.8.1971	21.8.1972			115	659	86	38.5
				21.8.1972	13.9.1973			190	746	82	38.5
				13.9.1973	24.8.1974			-46	997	69	38.5
				24.8.1974	18.8.1975			247	800	81	38.5
				1975	1976			112	832	80	38.5
				1976	1977			-372	1093	59	38.5
				1977	1978			-134	1018	67	38.5
				1978	1979			-109	1043	65	38.5
				1982	1983			-83	980	71	38.5
				1983	1984			-55	1009	69	38.5
				1984	1985			-12	897	76	38.5
				1985	1986			-259	1072	62	38.5
				1986	1987			-617	1444	9	38.5
				1987	1988			128	470	91	38.5
				1988	1989			28	511	90	38.5
				1989	1990			-448	1395	16	38.5
	NORWAY										
4	AU.BROEGGERBR.	N01550	OTH	1990	1991			-660	500	8	
	SWEDEN										
5	MARMAGLACIAEREN	S00799	FXD	29.5.1989	10.9.1990	1290	-1400	-110	1624	26	3.9
	FRANCE										
6	SAINT SORLIN	F00015	COM	14.9.1956	11.10.1957			-360			3
				11.10.1957	7.9.1958			-220			3
				7.9.1958	8.9.1959			-1180			3
				8.9.1959	28.9.1960			130			3

NR	GLACIER NAME	PSFG NR	SYS	FROM D M Y	TO D M Y	BW MM	BS MM	BN/BA MM	ELA M	AAR %	AREA KM²
				28.9.1960	28.9.1961			-280			3
				28.9.1961	7.10.1962			-520			3
				7.10.1962	9.10.1963			110			3
				9.10.1963	6.10.1964			-1460			3
				6.10.1964	12.10.1965			530			3
				12.10.1965	5.10.1966			690			3
				5.10.1966	3.10.1967			-260			3
				3.10.1967	20.9.1968			960			3
				20.9.1968	2.10.1969			450			3
				2.10.1969	13.10.1970			600			3
				13.10.1970	24.9.1971			-1310			3
				24.9.1971	28.9.1972			-270			3
				28.9.1972	27.9.1973			-640			3
				27.9.1973	21.9.1974			-670			3
				21.9.1974	16.10.1975			-810			3
				16.10.1975	15.10.1976			-1390			3
				15.10.1976	9.9.1977			1200			3
				9.9.1977	28.10.1978			1020			3
				28.10.1978	4.10.1979			200			3
				4.10.1979	8.10.1980			1040			3
				8.10.1980	9.10.1981			40			3
				9.10.1981	23.9.1982			-340			3
				23.9.1982	9.10.1983			-170			3
				9.10.1983	16.10.1984			610			3
				16.10.1984	26.9.1985			-470			3
				26.9.1985	1.10.1986			-1150			3
				1.10.1986	19.9.1987			-640			3
				19.9.1987	23.8.1988			10			3
				23.8.1988	19.9.1989			-1790			3
				19.9.1989	7.9.1990			-1290			3
	SWITZERLAND										
7	GRIES (AEGINA)	CH00003	FXD	1961	1962			-850	3010	31	6.69
				1962	1963			200	2740	65	6.69
				1963	1964			-990	3010	31	6.69
				1964	1965			690	2685	71	6.69
				1965	1966			20	2735	66	6.69
				1966	1967			400	2695	70	6.69
				1967	1968			620	2680	72	6.69
				1968	1969			490	2705	69	6.69
				1969	1970			-500	2970	38	6.69
				12.10.1970	9.10.1971			-1040	3145	7	6.69
				9.10.1971	9.10.1972			460	2710	68	6.69
				9.10.1972	7.10.1973			-1060	3135	7	6.69

NR	GLACIER NAME	PSFG NR	SYS	FROM D M Y	TO D M Y	BW MM	BS MM	BN/BA MM	ELA M	AAR %	AREA KM²
				7.10.1973	18.10.1974			-150	2835	56	6.69
				18.10.1974	6.10.1975			290	2740	65	6.69
				6.10.1975	30.9.1976			-1020	3100	10	6.69
				30.9.1976	29.9.1977			1280	2530	91	6.69
				29.9.1977	26.9.1978			970	2670	74	6.69
				26.9.1978	25.9.1979			-860	3070	18	6.337
				25.9.1979	29.9.1980			720	2660	78	6.337
				29.9.1980	24.9.1981			-230	2940	46	6.337
				24.9.1981	23.9.1982			-880	3030	28	6.337
				23.9.1982	23.9.1983			-550	3000	36	6.337
				23.9.1983	27.9.1984			0	2865	56	6.337
				27.9.1984	30.9.1985			-260	2878	54	6.337
				28.10.1985	22.9.1986			-530	2946	44	6.249
				22.9.1986	21.9.1987			-660	2985	38	6.249
				21.9.1987	21.9.1988			-880	3073	16	6.249
				21.9.1988	27.9.1989			-1060	3201	2	6.249
				27.9.1989	25.9.1990			-1740	3401	1	6.249
8	SILVRETTA	CH00090	FXD	1959	1960			480	2610	85	3.15
				1960	1961			330	2715	71	3.15
				1961	1962			-560	2860	38	3.15
				1962	1963			-990	2975	16	3.15
				1963	1964			-1410	3019	9	3.15
				1964	1965			1340	2490	97	3.15
				1965	1966			1210	2520	95	3.15
				1966	1967			350	2695	75	3.15
				1967	1968			640	2610	85	3.15
				1968	1969			-260	2785	54	3.15
				1969	1970			130	2715	71	3.15
				1970	1971			-920	2920	27	3.15
				1971	1972			-270	2825	45	3.15
				1972	1973			-1210	2980	15	3.15
				1973	1974			740	2560	92	3.15
				1974	1975			790	2580	89	3.15
				16.9.1975	16.9.1976			-510	2860	34	3.15
				16.9.1976	15.9.1977			620	2665	77	3.15
				15.9.1977	14.9.1978			940	2550	93	3.15
				14.9.1978	13.9.1979			-60	2790	48	3.15
				13.9.1979	14.9.1980			1110	2505	98	3.15
				14.9.1980	12.9.1981			350	2675	75	3.15
				12.9.1981	11.9.1982			-210	2790	48	3.15
				11.9.1982	10.9.1983			-550	2905	25	3.15
				10.9.1983	12.9.1984			280	2690	73	3.15
				12.9.1984	13.9.1985			510	2650	79	3.15
				13.9.1985	29.9.1986			-290			

NR	GLACIER NAME	PSFG NR	SYS	FROM D M Y	TO D M Y	BW MM	BS MM	BN/BA MM	ELA M	AAR %	AREA KM²
				29.9.1986	14.9.1987			-370	2820	42	3.15
				14.9.1987	27.9.1988			-600	2890	28	3.15
				27.9.1988	20.9.1989			-250	2791	48	3.15
				20.9.1989	19.9.1990			-570	2880	30	3.15
	AUSTRIA										
9	WURTEN K.	A00804		1982	1983	1363	-2392	-1029	3180	7	1.35
				1983	1984	913	-883	30	2670	57	1.322
				1984	1985	1123	-2218	-1095		8	1.295
				1985	1986	1167	-2739	-1572		1	1.24
				1986	1987	1482	-2307	-825	3105	14	1.191
				1987	1988	1259	-2037	-785	3130	11	1.162
				1988	1989	1255	-1398	-143	2940	28	1.135
				1989	1990	1168	-1928	-760	3040	21	1.133
	C.I.S.										
10	GARABASHI	SU03031	STR	3.9.1983	10.9.1984	1080	-740	340	3700	70	4.47
				10.9.1984	12.9.1985	840	-940	-100	3860	52	4.47
				12.9.1985	2.10.1986	820	-1460	-640	3950	38	4.47
				7.9.1989	5.9.1990	1110	-1020	90	3780	65	4.47
11	SHUMSKIY	SU06001	FXD	10.9.1989	9.9.1990	533	-1114	-581	3727	37	2.82
	CHINA										
12	URUMQIHE E-BR.	CN00010	FXD	1987	1988			-646	4050	32	1.163
				1988	1989			99	3923	68	1.163
				1989	1990			18	3908	69	1.163
13	URUMQIHE W-BR.	CN00010	FXD	1987	1988			-639	4110	43	0.677
				1988	1989			110	4036	74	0.677
				1989	1990			110	4010	73	0.677
14	XIAO DONGKZMADI	CN00038	FXD	1.9.1988	31.8.1989	152	373	525	5454	95	1.767
				31.8.1989	1.9.1990			49	5570	78	1.767

Notes

WORLD GLACIER MONITORING SERVICE

MASS BALANCE VERSUS ALTITUDE FOR SELECTED GLACIERS

TABLE CCC

NR	Record number
GLACIER NAME	15 alphabetic or numeric digits
YEAR	Balance year or measurement year
SYS	System of measurement: STR = Stratigraphic FXD = Fixed date COM = Combined System OTH = Other System
ALTITUDE	Altitude interval in meters above sea level
AREA	Area of altitude band and in square kilometers
BW	Mean specific winter balance in mm water equivalent
BS	Mean specific summer balance in mm water equivalent
BN/BA	Mean specific net balance or annual balance in mm water equivalent
SUMMARY	Total and mean specific values computed from data for the individual altitude intervals

NR	GLACIER NAME	YEAR	SYS	ALTITUDE FROM	ALTITUDE TO	AREA KM²	BW MM	BS MM	BN/BA MM
	CANADA								
1.1	DEVON ICE CAP	1991	STR	1700	1800	37.5			190
	CD00431			1600	1700	6			190
				1500	1600	122.6			190
				1400	1500	115			170
				1300	1400	217.5			50
				1200	1300	180			-60
				1100	1200	160			-180
				1000	1100	235			-290
				900	1000	192.5			-410
				800	900	96			-520
				700	800	82.5			-640
				600	700	75			-750
				500	600	70			-870
				400	500	10			-980
				300	400	12.5			-1100
				200	300	12.5			-1210
				100	200	7			-1310
				0	100	5			-1450
	Summary Data			0	1800	1667.6	84	-314	-230
1.2	DEVON ICE CAP	1992	STR	1700	1800	37.5			180
	CD00431			1600	1700	6			160
				1500	1600	122.6			150
				1400	1500	115			150
				1300	1400	217.5			140
				1200	1300	180			170
				1100	1200	160			190
				1000	1100	235			230
				900	1000	192.5			170
				800	900	96			20
				700	800	82.5			-90
				600	700	75			-190
				500	600	70			-300
				400	500	10			-400
				300	400	12.5			-500
				200	300	12.5			-610
				100	200	7			-710
				0	100	5			-870
	Summary Data			0	1800	1667.6	139	-43	96
1.3	DEVON ICE CAP	1993	STR	1700	1800	37.5			210
	CD00431			1600	1700	6			260
				1500	1600	122.6			190
				1400	1500	115			250
				1300	1400	217.5			250
				1200	1300	180			110
				1100	1200	160			10
				1000	1100	235			-100
				900	1000	192.5			-200
				800	900	96			-310
				700	800	82.5			-420
				600	700	75			-520
				500	600	70			-630
				400	500	10			-730
				300	400	12.5			-820

NR	GLACIER NAME	YEAR	SYS	ALTITUDE FROM	TO	AREA KM²	BW MM	BS MM	BN/BA MM
				200	300	12.5			-860
				100	200	7			-900
				0	100	5			-940
	Summary Data			0	1800	1667.6	103	-165	-62
1.4	DEVON ICE CAP	1994	STR	1700	1800	37.5			200
	CD00431			1600	1700	6			140
				1500	1600	122.6			140
				1400	1500	115			150
				1300	1400	217.5			170
				1200	1300	180			170
				1100	1200	160			180
				1000	1100	235			40
				900	1000	192.5			-100
				800	900	96			-250
				700	800	82.5			-390
				600	700	75			-530
				500	600	70			-670
				400	500	10			-820
				300	400	12.5			-960
				200	300	12.5			-1100
				100	200	7			-1240
				0	100	5			-1380
	Summary Data			0	1800	1667.6	62	-94	-32
1.5	DEVON ICE CAP	1995	STR	1700	1800	37.5			220
	CD00431			1600	1700	6			190
				1500	1600	122.6			170
				1400	1500	115			170
				1300	1400	217.5			290
				1200	1300	180			190
				1100	1200	160			10
				1000	1100	235			-160
				900	1000	192.5			-340
				800	900	96			-510
				700	800	82.5			-690
				600	700	75			-860
				500	600	70			-1040
				400	500	10			-1220
				300	400	12.5			-1250
				200	300	12.5			-1290
				100	200	7			-1340
				0	100	5			-1380
	Summary Data			0	1800	1667.6	87	-234	-147
2.1	PEYTO	1993	STR	3100	3200	0.01	1107	0	1107
	CD01640			3000	3100	0.13	1030	0	1030
				2900	3000	0.6	953	-347	606
				2800	2900	1.7	875	-829	46
				2700	2800	2.13	798	-1311	-514
				2600	2700	2.22	739	-1924	-1185
				2500	2600	2.22	662	-2228	-1566
				2400	2500	1.45	549	-2714	-2165
				2300	2400	0.31	449	-2956	-2507
				2200	2300	0.87	371	-3968	-3597

NR	GLACIER NAME	YEAR	SYS	ALTITUDE FROM	ALTITUDE TO	AREA KM²	BW MM	BS MM	BN/BA MM
				2100	2200	0.1	392	-4208	-3816
	Summary Data			2100	3200	11.74	705	-1920	-1215
2.2	PEYTO	1994	STR	3100	3200	0.01	1492	0	1492
	CD01640			3000	3100	0.13	1386	0	1386
				2900	3000	0.6	1281	0	1281
				2800	2900	1.7	1175	-211	964
				2700	2800	2.13	1070	-1112	-43
				2600	2700	2.22	944	-2379	-1435
				2500	2600	2.22	894	-2649	-1755
				2400	2500	1.45	790	-3583	-2793
				2300	2400	0.31	610	-4800	-4190
				2200	2300	0.87	462	-5397	-4935
				2100	2200	0.1	500	-6797	-6297
	Summary Data			2100	3200	11.74	940	-2235	-1295
2.3	PEYTO	1995	STR	3100	3200	0.01	1842	0	1842
	CD01640			3000	3100	0.13	1701	0	1701
				2900	3000	0.6	1560	0	1560
				2800	2900	1.7	1418	-121	1298
				2700	2800	2.13	1277	-685	592
				2600	2700	2.22	1117	-1318	-201
				2500	2600	2.22	1045	-1671	-626
				2400	2500	1.45	909	-2230	-1321
				2300	2400	0.31	647	-3051	-2404
				2200	2300	0.87	434	-3974	-3540
				2100	2200	0.1	548	-3724	-3176
	Summary Data			2100	3200	11.74	1105	-1405	-300
3.1	PLACE	1994	STR	2500	2600	0.026	1639	-1560	79
	CD01660			2400	2500	0.104	1635	-1580	55
				2300	2400	0.528	1451	-2267	-816
				2200	2300	0.279	1800	-3088	-1288
				2100	2200	0.439	1914	-3814	-1900
				2000	2100	1.131	1685	-4102	-2417
				1900	2000	0.777	1392	-4087	-2695
				1800	1900	0.166	1297	-4243	-2946
	Summary Data			1800	2600	3.45	1601	-3611	-2010
3.2	PLACE	1995	STR	2500	2600	0.026	1447	-2016	-569
	CD01660			2400	2500	0.104	1446	-2026	-580
				2300	2400	0.528	1313	-2763	-1450
				2200	2300	0.279	1399	-3939	-2540
				2100	2200	0.439	1296	-3992	-2696
				2000	2100	1.131	1116	-3545	-2429
				1900	2000	0.777	893	-4073	-3180
				1800	1900	0.166	875	-4646	-3771
	Summary Data			1800	2600	3.45	1143	-3629	-2486
4.1	WHITE	1960	FXD	1600	1700	0.4			480
	CD02340			1500	1600	1.6			480
				1400	1500	4			470
				1300	1400	6.1			252
				1200	1300	5.7			-29
				1100	1200	5.1			-287
				1000	1100	3.7			-526

NR	GLACIER NAME	YEAR	SYS	ALTITUDE FROM	ALTITUDE TO	AREA KM²	BW MM	BS MM	BN/BA MM
				900	1000	2.6			-750
				800	900	2			-961
				700	800	1.3			-1164
				600	700	1.4			-1362
				500	600	0.9			-1559
				400	500	0.7			-1758
				300	400	1			-1964
				200	300	1.2			-2179
				100	200	0.8			-2408
	Summary Data			100	1700	38.5			-404
4.2	WHITE	1961	FXD	1600	1700	0.4			208
	CD02340			1500	1600	1.6			208
				1400	1500	4			245
				1300	1400	6.1			300
				1200	1300	5.7			298
				1100	1200	5.1			246
				1000	1100	3.7			153
				900	1000	2.6			26
				800	900	2			-127
				700	800	1.3			-298
				600	700	1.4			-480
				500	600	0.9			-665
				400	500	0.7			-846
				300	400	1			-1013
				200	300	1.2			-1161
				100	200	0.8			-1247
	Summary Data			100	1700	38.5			23
4.3	WHITE	1962	FXD	1600	1700	0.4			407
	CD02340			1500	1600	1.6			407
				1400	1500	4			267
				1300	1400	6.1			-68
				1200	1300	5.7			-376
				1100	1200	5.1			-662
				1000	1100	3.7			-929
				900	1000	2.6			-1181
				800	900	2			-1420
				700	800	1.3			-1651
				600	700	1.4			-1876
				500	600	0.9			-2100
				400	500	0.7			-2325
				300	400	1			-2556
				200	300	1.2			-2796
				100	200	0.8			-3047
	Summary Data			100	1700	38.5			-781
4.4	WHITE	1963	FXD	1600	1700	0.4			407
	CD02340			1500	1600	1.6			407
				1400	1500	4			402
				1300	1400	6.1			269
				1200	1300	5.7			107
				1100	1200	5.1			-26
				1000	1100	3.7			-140
				900	1000	2.6			-249
				800	900	2			-362

NR	GLACIER NAME	YEAR	SYS	ALTITUDE FROM	ALTITUDE TO	AREA KM²	BW MM	BS MM	BN/BA MM
				700	800	1.3			-494
				600	700	1.4			-654
				500	600	0.9			-855
				400	500	0.7			-1110
				300	400	1			-1428
				200	300	1.2			-1823
				100	200	0.8			-2307
	Summary Data			100	1700	38.5			-154
4.5	WHITE	1964	FXD	1600	1700	0.4			606
	CD02340			1500	1600	1.6			606
				1400	1500	4			604
				1300	1400	6.1			531
				1200	1300	5.7			452
				1100	1200	5.1			402
				1000	1100	3.7			368
				900	1000	2.6			341
				800	900	2			310
				700	800	1.3			266
				600	700	1.4			197
				500	600	0.9			95
				400	500	0.7			-52
				300	400	1			-253
				200	300	1.2			-520
				100	200	0.8			-837
	Summary Data			100	1700	38.5			350
4.6	WHITE	1965	FXD	1600	1700	0.4			200
	CD02340			1500	1600	1.6			200
				1400	1500	4			200
				1300	1400	6.1			216
				1200	1300	5.7			218
				1100	1200	5.1			194
				1000	1100	3.7			143
				900	1000	2.6			64
				800	900	2			-43
				700	800	1.3			-179
				600	700	1.4			-345
				500	600	0.9			-542
				400	500	0.7			-771
				300	400	1			-1032
				200	300	1.2			-1326
				100	200	0.8			-1593
	Summary Data			100	1700	38.5			-9
4.7	WHITE	1966	FXD	1600	1700	0.4			349
	CD02340			1500	1600	1.6			349
				1400	1500	4			349
				1300	1400	6.1			334
				1200	1300	5.7			282
				1100	1200	5.1			193
				1000	1100	3.7			74
				900	1000	2.6			-71
				800	900	2			-239
				700	800	1.3			-424
				600	700	1.4			-621

NR	GLACIER NAME	YEAR	SYS	ALTITUDE FROM	ALTITUDE TO	AREA KM²	BW MM	BS MM	BN/BA MM
				500	600	0.9			-826
				400	500	0.7			-1035
				300	400	1			-1243
				200	300	1.2			-1445
				100	200	0.8			-1615
	Summary Data			100	1700	38.5			-22
4.8	WHITE	1967	FXD	1600	1700	0.4			342
	CD02340			1500	1600	1.6			342
				1400	1500	4			343
				1300	1400	6.1			360
				1200	1300	5.7			357
				1100	1200	5.1			319
				1000	1100	3.7			249
				900	1000	2.6			152
				800	900	2			29
				700	800	1.3			-116
				600	700	1.4			-282
				500	600	0.9			-463
				400	500	0.7			-659
				300	400	1			-866
				200	300	1.2			-1081
				100	200	0.8			-1265
	Summary Data			100	1700	38.5			121
4.9	WHITE	1968	FXD	1600	1700	0.4			178
	CD02340			1500	1600	1.6			178
				1400	1500	4			178
				1300	1400	6.1			140
				1200	1300	5.7			33
				1100	1200	5.1			-129
				1000	1100	3.7			-335
				900	1000	2.6			-574
				800	900	2			-835
				700	800	1.3			-1105
				600	700	1.4			-1375
				500	600	0.9			-1631
				400	500	0.7			-1864
				300	400	1			-2061
				200	300	1.2			-2211
				100	200	0.8			-2298
	Summary Data			100	1700	38.5			-406
4.10	WHITE	1969	FXD	1600	1700	0.4			419
	CD02340			1500	1600	1.6			419
				1400	1500	4			420
				1300	1400	6.1			434
				1200	1300	5.7			412
				1100	1200	5.1			341
				1000	1100	3.7			225
				900	1000	2.6			73
				800	900	2			-112
				700	800	1.3			-321
				600	700	1.4			-551
				500	600	0.9			-793
				400	500	0.7			-1042

NR	GLACIER NAME	YEAR	SYS	ALTITUDE		AREA	BW	BS	BN/BA
				FROM	TO	KM²	MM	MM	MM
				300	400	1			-1292
				200	300	1.2			-1538
				100	200	0.8			-1749
	Summary Data			100	1700	38.5			74
4.11	WHITE	1970	FXD	1600	1700	0.4			245
	CD02340			1500	1600	1.6			245
				1400	1500	4			246
				1300	1400	6.1			274
				1200	1300	5.7			271
				1100	1200	5.1			219
				1000	1100	3.7			124
				900	1000	2.6			-5
				800	900	2			-160
				700	800	1.3			-334
				600	700	1.4			-520
				500	600	0.9			-709
				400	500	0.7			-894
				300	400	1			-1067
				200	300	1.2			-1220
				100	200	0.8			-1336
	Summary Data			100	1700	38.5			-4
4.12	WHITE	1971	FXD	1600	1700	0.4			352
	CD02340			1500	1600	1.6			352
				1400	1500	4			352
				1300	1400	6.1			320
				1200	1300	5.7			225
				1100	1200	5.1			77
				1000	1100	3.7			-114
				900	1000	2.6			-336
				800	900	2			-578
				700	800	1.3			-831
				600	700	1.4			-1082
				500	600	0.9			-1321
				400	500	0.7			-1538
				300	400	1			-1720
				200	300	1.2			-1858
				100	200	0.8			-1937
	Summary Data			100	1700	38.5			-184
4.13	WHITE	1972	FXD	1600	1700	0.4			287
	CD02340			1500	1600	1.6			287
				1400	1500	4			287
				1300	1400	6.1			270
				1200	1300	5.7			256
				1100	1200	5.1			248
				1000	1100	3.7			237
				900	1000	2.6			215
				800	900	2			171
				700	800	1.3			98
				600	700	1.4			-14
				500	600	0.9			-173
				400	500	0.7			-389
				300	400	1			-670
				200	300	1.2			-1025

NR	GLACIER NAME	YEAR	SYS	ALTITUDE		AREA	BW	BS	BN/BA
				FROM	TO	KM²	MM	MM	MM
				100	200	0.8			-1463
	Summary Data			100	1700	38.5			115
4.14	WHITE	1973	FXD	1600	1700	0.4			348
	CD02340			1500	1600	1.6			348
				1400	1500	4			350
				1300	1400	6.1			391
				1200	1300	5.7			418
				1100	1200	5.1			404
				1000	1100	3.7			352
				900	1000	2.6			266
				800	900	2			149
				700	800	1.3			5
				600	700	1.4			-162
				500	600	0.9			-350
				400	500	0.7			-555
				300	400	1			-772
				200	300	1.2			-1000
				100	200	0.8			-1152
	Summary Data			100	1700	38.5			190
4.15	WHITE	1974	FXD	1600	1700	0.4			225
	CD02340			1500	1600	1.6			225
				1400	1500	4			226
				1300	1400	6.1			223
				1200	1300	5.7			195
				1100	1200	5.1			137
				1000	1100	3.7			54
				900	1000	2.6			-54
				800	900	2			-182
				700	800	1.3			-328
				600	700	1.4			-489
				500	600	0.9			-664
				400	500	0.7			-848
				300	400	1			-1040
				200	300	1.2			-1236
				100	200	0.8			-1399
	Summary Data			100	1700	38.5			-46
4.16	WHITE	1975	FXD	1600	1700	0.4			588
	CD02340			1500	1600	1.6			588
				1400	1500	4			588
				1300	1400	6.1			586
				1200	1300	5.7			554
				1100	1200	5.1			485
				1000	1100	3.7			383
				900	1000	2.6			250
				800	900	2			89
				700	800	1.3			-96
				600	700	1.4			-304
				500	600	0.9			-532
				400	500	0.7			-776
				300	400	1			-1034
				200	300	1.2			-1304
				100	200	0.8			-1538
	Summary Data			100	1700	38.5			247

NR	GLACIER NAME	YEAR	SYS	ALTITUDE		AREA	BW	BS	BN/BA
				FROM	TO	KM²	MM	MM	MM
4.17	WHITE	1976	COM	1600	1700	0.4			291
	CD02340			1500	1600	1.6			291
				1400	1500	4			292
				1300	1400	6.1			339
				1200	1300	5.7			364
				1100	1200	5.1			339
				1000	1100	3.7			270
				900	1000	2.6			164
				800	900	2			27
				700	800	1.3			-135
				600	700	1.4			-315
				500	600	0.9			-506
				400	500	0.7			-702
				300	400	1			-896
				200	300	1.2			-1082
				100	200	0.8			-1246
	Summary Data			100	1700	38.5			112
4.18	WHITE	1977	COM	1600	1700	0.4			78
	CD02340			1500	1600	1.6			78
				1400	1500	4			81
				1300	1400	6.1			201
				1200	1300	5.7			238
				1100	1200	5.1			121
				1000	1100	3.7			-119
				900	1000	2.6			-448
				800	900	2			-833
				700	800	1.3			-1242
				600	700	1.4			-1642
				500	600	0.9			-2000
				400	500	0.7			-2283
				300	400	1			-2458
				200	300	1.2			-2493
				100	200	0.8			-2365
	Summary Data			100	1700	38.5			-372
4.19	WHITE	1978	COM	1600	1700	0.4			209
	CD02340			1500	1600	1.6			209
				1400	1500	4			210
				1300	1400	6.1			285
				1200	1300	5.7			310
				1100	1200	5.1			229
				1000	1100	3.7			64
				900	1000	2.6			-164
				800	900	2			-435
				700	800	1.3			-729
				600	700	1.4			-1025
				500	600	0.9			-1302
				400	500	0.7			-1539
				300	400	1			-1716
				200	300	1.2			-1813
				100	200	0.8			-1821
	Summary Data			100	1700	38.5			-134
4.20	WHITE	1979	COM	1600	1700	0.4			196
	CD02340			1500	1600	1.6			196

NR	GLACIER NAME	YEAR	SYS	ALTITUDE FROM	TO	AREA KM²	BW MM	BS MM	BN/BA MM
				1400	1500	4			197
				1300	1400	6.1			226
				1200	1300	5.7			213
				1100	1200	5.1			136
				1000	1100	3.7			9
				900	1000	2.6			-156
				800	900	2			-349
				700	800	1.3			-556
				600	700	1.4			-766
				500	600	0.9			-966
				400	500	0.7			-1144
				300	400	1			-1289
				200	300	1.2			-1387
				100	200	0.8			-1428
	Summary Data			100	1700	38.5			-109
4.21	WHITE	1983	COM	1600	1700	0.4			160
	CD02340			1500	1600	1.6			160
				1400	1500	4			193
				1300	1400	6.1			315
				1200	1300	5.7			344
				1100	1200	5.1			279
				1000	1100	3.7			136
				900	1000	2.6			-67
				800	900	2			-314
				700	800	1.3			-588
				600	700	1.4			-872
				500	600	0.9			-1150
				400	500	0.7			-1404
				300	400	1			-1619
				200	300	1.2			-1777
				100	200	0.8			-1861
	Summary Data			100	1700	38.5			-83
4.22	WHITE	1984	COM	1600	1700	0.4			338
	CD02340			1500	1600	1.6			349
				1400	1500	4			354
				1300	1400	6.1			326
				1200	1300	5.7			265
				1100	1200	5.1			174
				1000	1100	3.7			56
				900	1000	2.6			-89
				800	900	2			-258
				700	800	1.3			-449
				600	700	1.4			-660
				500	600	0.9			-889
				400	500	0.7			-1134
				300	400	1			-1393
				200	300	1.2			-1664
				100	200	0.8			-1945
	Summary Data			100	1700	38.5			-55
4.23	WHITE	1985	COM	1600	1700	0.4			341
	CD02340			1500	1600	1.6			324
				1400	1500	4			286
				1300	1400	6.1			253

NR	GLACIER NAME	YEAR	SYS	ALTITUDE FROM	ALTITUDE TO	AREA KM²	BW MM	BS MM	BN/BA MM
				1200	1300	5.7			219
				1100	1200	5.1			177
				1000	1100	3.7			123
				900	1000	2.6			49
				800	900	2			-51
				700	800	1.3			-182
				600	700	1.4			-350
				500	600	0.9			-563
				400	500	0.7			-825
				300	400	1			-1144
				200	300	1.2			-1524
				100	200	0.8			-1972
	Summary Data			100	1700	38.5			-12
4.24	WHITE	1986	COM	1600	1700	0.4			125
	CD02340			1500	1600	1.6			212
				1400	1500	4			355
				1300	1400	6.1			386
				1200	1300	5.7			319
				1100	1200	5.1			167
				1000	1100	3.7			-56
				900	1000	2.6			-336
				800	900	2			-659
				700	800	1.3			-1011
				600	700	1.4			-1380
				500	600	0.9			-1750
				400	500	0.7			-2108
				300	400	1			-2440
				200	300	1.2			-2734
				100	200	0.8			-2974
	Summary Data			100	1700	38.5			-259
4.25	WHITE	1987	COM	1600	1700	0.4			47
	CD02340			1500	1600	1.6			38
				1400	1500	4			2
				1300	1400	6.1			-62
				1200	1300	5.7			-156
				1100	1200	5.1			-282
				1000	1100	3.7			-441
				900	1000	2.6			-635
				800	900	2			-867
				700	800	1.3			-1138
				600	700	1.4			-1449
				500	600	0.9			-1804
				400	500	0.7			-2203
				300	400	1			-2649
				200	300	1.2			-3143
				100	200	0.8			-3688
	Summary Data			100	1700	38.5			-617
4.26	WHITE	1988	COM	1600	1700	0.4			427
	CD02340			1500	1600	1.6			357
				1400	1500	4			227
				1300	1400	6.1			163
				1200	1300	5.7			149
				1100	1200	5.1			171

NR	GLACIER NAME	YEAR	SYS	ALTITUDE FROM	ALTITUDE TO	AREA KM²	BW MM	BS MM	BN/BA MM
				1000	1100	3.7			210
				900	1000	2.6			253
				800	900	2			282
				700	800	1.3			283
				600	700	1.4			239
				500	600	0.9			135
				400	500	0.7			-47
				300	400	1			-320
				200	300	1.2			-701
				100	200	0.8			-1203
	Summary Data			100	1700	38.5			128
4.27	WHITE	1989	COM	1600	1700	0.4			393
	CD02340			1500	1600	1.6			309
				1400	1500	4			150
				1300	1400	6.1			63
				1200	1300	5.7			32
				1100	1200	5.1			42
				1000	1100	3.7			76
				900	1000	2.6			118
				800	900	2			152
				700	800	1.3			163
				600	700	1.4			134
				500	600	0.9			49
				400	500	0.7			-107
				300	400	1			-351
				200	300	1.2			-698
				100	200	0.8			-1165
	Summary Data			100	1700	38.5			28
4.28	WHITE	1990	COM	1600	1700	0.4			134
	CD02340			1500	1600	1.6			112
				1400	1500	4			44
				1300	1400	6.1			-41
				1200	1300	5.7			-143
				1100	1200	5.1			-263
				1000	1100	3.7			-398
				900	1000	2.6			-549
				800	900	2			-716
				700	800	1.3			-897
				600	700	1.4			-1092
				500	600	0.9			-1300
				400	500	0.7			-1522
				300	400	1			-1756
				200	300	1.2			-2001
				100	200	0.8			-2259
	Summary Data			100	1700	38.5			-448
4.29	WHITE	1991	COM	1600	1700	0.4			333
	CD02340			1500	1600	1.6			294
				1400	1500	4			206
				1300	1400	6.1			130
				1200	1300	5.7			59
				1100	1200	5.1			-13
				1000	1100	3.7			-91
				900	1000	2.6			-183

NR	GLACIER NAME	YEAR	SYS	ALTITUDE FROM	ALTITUDE TO	AREA KM²	BW MM	BS MM	BN/BA MM
				800	900	2			-293
				700	800	1.3			-429
				600	700	1.4			-596
				500	600	0.9			-800
				400	500	0.7			-1048
				300	400	1			-1346
				200	300	1.2			-1700
				100	200	0.8			-2115
	Summary Data			100	1700	38.5			-179
4.30	WHITE	1994	COM	1700	1800				428
	CD02340			1600	1700				428
				1500	1600				324
				1400	1500				153
				1300	1400				26
				1200	1300				-87
				1100	1200				-183
				1000	1100				-270
				900	1000				-359
				800	900				-458
				700	800				-605
				600	700				-763
				500	600				-940
				400	500				-1196
				300	400				-1515
				200	300				-1967
				100	200				-2337
				0	100				-2618
	Summary Data			0	1800				-314
4.31	WHITE	1995	COM	1700	1800				283
	CD02340			1600	1700				283
				1500	1600				285
				1400	1500				257
				1300	1400				187
				1200	1300				69
				1100	1200				-89
				1000	1100				-276
				900	1000				-508
				800	900				-725
				700	800				-1024
				600	700				-1288
				500	600				-1529
				400	500				-1808
				300	400				-2081
				200	300				-2378
				100	200				-2567
				0	100				-2691
	Summary Data			0	1800				-362
	U.S.A.								
5.1	MCCALL	1993	STR	2400	2500	0.11			-10
	US00001			2300	2400	0.72			-30
				2200	2300	1.16			-200
				2100	2200	1.36			-380
				2000	2100	0.89			-630

NR	GLACIER NAME	YEAR	SYS	ALTITUDE FROM	ALTITUDE TO	AREA KM²	BW MM	BS MM	BN/BA MM
				1900	2000	0.81			-740
				1800	1900	0.53			-1040
				1700	1800	0.45			-1120
				1600	1700	0.6			-1460
				1500	1600	0.36			-1590
				1400	1500	0.2			-2030
	Summary Data			1400	2500	7.23			-480
5.2	MCCALL	1994	STR	2400	2500	0.11			-10
	US00001			2300	2400	0.72			-150
				2200	2300	1.16			-420
				2100	2200	1.36			-510
				2000	2100	0.89			-780
				1900	2000	0.81			-1030
				1800	1900	0.53			-1350
				1700	1800	0.45			-1500
				1600	1700	0.6			-2490
				1500	1600	0.36			-2390
				1400	1500	0.24			-3170
	Summary Data			1400	2500	7.23			-740
5.3	MCCALL	1995	STR	2400	2500	0.11			-250
	US00001			2300	2400	0.72			-330
				2200	2300	1.16			-420
				2100	2200	1.36			-450
				2000	2100	0.89			-610
				1900	2000	0.81			-670
				1800	1900	0.53			-770
				1700	1800	0.45			-800
				1600	1700	0.6			-1260
				1500	1600	0.36			-1480
				1400	1500	0.24			-2160
	Summary Data			1400	2500	7.23			-550
	NORWAY								
6.1	AALFOTBREEN	1991	OTH	1350	1378	0.274	4400	-3000	1400
	N36204			1300	1350	1.015	4300	-3050	1250
				1250	1300	0.811	4150	-3120	1030
				1200	1250	0.765	4000	-3170	830
				1150	1200	0.649	3950	-3300	650
				1100	1150	0.553	3900	-3450	450
				1050	1100	0.356	3950	-3700	250
				1000	1050	0.216	4000	-3970	30
				950	1000	0.125	4000	-4220	-220
				900	950	0.047	3650	-4570	-920
				870	900	0.004	3350	-4870	-1520
	Summary Data			870	1378	4.8	4090	-3300	790
6.2	AALFOTBREEN	1992	OTH	1350	1378	0.274	5800	-2400	3400
	N36204			1300	1350	1.015	6080	-2640	3440
				1250	1300	0.811	6060	-2830	3230
				1200	1250	0.765	5850	-2970	2880
				1150	1200	0.649	5340	-3240	2100
				1100	1150	0.553	4940	-3780	1160
				1050	1100	0.356	4360	-3980	380
				1000	1050	0.216	3830	-4400	-570

NR	GLACIER NAME	YEAR	SYS	ALTITUDE FROM	ALTITUDE TO	AREA KM²	BW MM	BS MM	BN/BA MM
				950	1000	0.125	3600	-4780	-1180
				900	950	0.047	3840	-5320	-1480
				870	900	0.004	4150	-5550	-1400
	Summary Data			870	1378	4.8	5480	-3190	2290
6.3	AALFOTBREEN	1993	OTH	1350	1378	0.274	4680	-2080	2600
	N36204			1300	1350	1.015	4650	-2200	2450
				1250	1300	0.811	4780	-2480	2300
				1200	1250	0.765	4700	-2780	1920
				1150	1200	0.649	4750	-3040	1710
				1100	1150	0.553	4820	-3100	1720
				1050	1100	0.356	4940	-3220	1720
				1000	1050	0.216	5180	-3450	1730
				950	1000	0.125	5660	-3700	1960
				900	950	0.047	6400	-3940	2460
				870	900	0.004	6650	-4050	2600
	Summary Data			870	1378	4.8	4810	-2740	2070
6.4	AALFOTBREEN	1994	OTH	1350	1378	0.274	3620	-2500	1120
	N36204			1300	1350	1.015	3800	-2540	1260
				1250	1300	0.811	3780	-2620	1160
				1200	1250	0.765	3620	-2720	900
				1150	1200	0.649	3530	-3020	510
				1100	1150	0.553	3600	-3320	280
				1050	1100	0.356	3760	-3600	160
				1000	1050	0.216	3950	-3800	150
				950	1000	0.125	4060	-4000	60
				900	950	0.047	4150	-4150	0
				870	900	0.004	4180	-4260	-80
	Summary Data			870	1378	4.8	3710	-2920	780
6.5	AALFOTBREEN	1995	OTH	1350	1378	0.274	5170	-3040	2130
	N36204			1300	1350	1.015	5660	-3170	2490
				1250	1300	0.811	5350	-3380	1970
				1200	1250	0.765	5190	-3700	1490
				1150	1200	0.649	5050	-4200	850
				1100	1150	0.553	4700	-4680	20
				1050	1100	0.356	4480	-4950	-470
				1000	1050	0.216	4240	-5200	-960
				950	1000	0.125	4050	-5380	-1330
				900	950	0.047	4020	-5580	-1560
				870	900	0.004	4130	-5700	-1570
	Summary Data			870	1378	4.8	5100	-3900	1200
7.1	AU.BROEGGERBR.	1990		550	600	0.12	950	-700	250
	N15504			500	550	0.25	850	-750	100
				450	500	0.46	850	-800	50
				400	450	0.56	750	-900	-150
				350	400	0.79	650	-1000	-350
				300	350	1.02	650	-1150	-500
				250	300	0.92	600	-1250	-650
				200	250	0.95	650	-1400	-750
				150	200	0.71	550	-1650	-1100
				100	150	0.31	500	-1900	-1400
				50	100	0.03	450	-2000	-1550
	Summary Data			50	600				-660

NR	GLACIER NAME	YEAR	SYS	ALTITUDE FROM	TO	AREA KM²	BW MM	BS MM	BN/BA MM
7.2	AU.BROEGGERBR.	1991		550	600	0.12	1000	400	600
	N15504			500	550	0.25	1000	450	550
				450	500	0.46	850	500	350
				400	450	0.56	750	600	150
				350	400	0.79	900	650	250
				300	350	1.02	900	700	200
				250	300	0.92	800	800	0
				200	250	0.95	800	900	-100
				150	200	0.71	720	1150	-430
				100	150	0.31	600	1500	-900
				50	100	0.03	480	1500	1020
	Summary Data			50	600	6.12	920	-790	130
7.3	AU.BROEGGERBR.	1993		550	600	0.12	570	-970	-400
	N15504			500	550	0.25	500	-1100	-600
				450	500	0.46	420	-1160	-740
				400	450	0.56	500	-1200	-700
				350	400	0.79	650	-1390	-740
				300	350	1.02	620	-1320	-700
				250	300	0.92	570	-1470	-900
				200	250	0.95	520	-1770	-1250
				150	200	0.71	520	-2270	-1750
				100	150	0.31	400	-2600	-2200
	Summary Data			50	100	0.03	300	-3200	-2900
				50	600	6.12	540	-1570	-1030
7.4	AU.BROEGGERBR.	1994		550	600	0.12	1000	-800	200
	N15504			500	550	0.25	1000	-850	150
				450	500	0.46	950	-840	110
				400	450	0.56	850	-770	80
				350	400	0.79	950	-890	60
				300	350	1.02	900	-940	-40
				250	300	0.92	750	-850	-100
				200	250	0.95	650	-980	-330
				150	200	0.71	550	-1180	-630
				100	150	0.31	450	-1550	-1100
				50	100	0.03	400	-2050	-1650
	Summary Data			50	600	6.12	790	-950	-160
7.5	AU.BROEGGERBR.	1995		550	600	0.12	810	-530	280
	N15504			500	550	0.25	810	-550	260
				450	500	0.46	680	-580	100
				400	450	0.56	560	-640	-80
				350	400	0.79	590	-730	-140
				300	350	1.02	470	-990	-520
				250	300	0.92	380	-1220	-840
				200	250	0.95	410	-1390	-980
				150	200	0.71	390	-1790	-1400
				100	150	0.31	310	-2260	-1950
				50	100	0.03	240	-2980	-2740
	Summary Data			50	600	6.12	560	-1340	-780
8.1	AUSTDALSBREEN	1991	OTH	1700	1757	0.157	1700	-800	900
	N37323			1650	1700	0.128	1850	-900	950
				1600	1650	0.376	2000	-1000	1000
				1550	1600	2.448	2000	-1150	850

NR	GLACIER NAME	YEAR	SYS	ALTITUDE FROM	ALTITUDE TO	AREA KM²	BW MM	BS MM	BN/BA MM
				1500	1550	2.539	1900	-1250	650
				1450	1500	1.922	1800	-1400	400
				1400	1450	1.355	1600	-1550	50
				1350	1400	1.01	1350	-1800	-450
				1300	1350	0.787	1100	-2050	-950
				1250	1300	0.687	750	-2350	-1600
				1200	1250	0.435	500	-2700	-2200
	Summary Data			1200	1757	11.9	1640	-1640	0
8.2	AUSTDALSBREEN	1992	OTH	1700	1757	0.157	3450	-500	2950
	N37323			1650	1700	0.128	3350	-650	2700
				1600	1650	0.376	3250	-850	2400
				1550	1600	2.448	3150	-650	2500
				1500	1550	2.539	3050	-1350	1700
				1450	1500	1.922	2900	-1700	1200
				1400	1450	1.355	2750	-2150	600
				1350	1400	1.01	2600	-2600	0
				1300	1350	0.787	2300	-3200	-900
				1250	1300	0.687	1800	-3800	-2000
				1200	1250	0.435	1250	-4600	-3350
	Summary Data			1200	1757	11.9	2800	-2260	540
8.3	AUSTDALSBREEN	1993	OTH	1700	1757	0.157	3150	-600	2550
	N37323			1650	1700	0.128	3200	-700	2500
				1600	1650	0.376	3100	-800	2300
				1550	1600	2.448	2950	-450	2500
				1500	1550	2.539	2800	-1050	1750
				1450	1500	1.922	2650	-1250	1400
				1400	1450	1.355	2450	-1500	950
				1350	1400	1.01	2300	-1800	500
				1300	1350	0.787	2150	-2100	50
				1250	1300	0.687	1950	-2550	-600
				1200	1250	0.435	1450	-3300	-1850
	Summary Data			1200	1757	11.9	2600	-1690	910
8.4	AUSTDALSBREEN	1994	OTH	1700	1757	0.157	1800	-900	900
	N37323			1650	1700	0.128	2100	-1000	1100
				1600	1650	0.376	2150	-1050	1100
				1550	1600	2.448	2100	-1100	1000
				1500	1550	2.539	2000	-1200	800
				1450	1500	1.922	1900	-1450	450
				1400	1450	1.355	1750	-1750	0
				1350	1400	1.01	1550	-2050	-500
				1300	1350	0.787	1350	-2400	-1050
				1250	1300	0.687	1100	-3050	-1950
				1200	1250	0.435	700	-3850	-3150
	Summary Data			1200	1757	11.8	1810	-1880	-70
8.5	AUSTDALSBREEN	1995	OTH	1700	1757	0.157	3000	-1250	1750
	N37323			1650	1700	0.128	3000	-1280	1720
				1600	1650	0.376	3000	-1320	1680
				1550	1600	2.448	3000	-1350	1650
				1500	1550	2.539	3000	-1450	1550
				1450	1500	1.922	2900	-1600	1250
				1400	1450	1.355	2500	-1850	650
				1350	1400	1.01	2300	-2100	150

NR	GLACIER NAME	YEAR	SYS	ALTITUDE FROM	ALTITUDE TO	AREA KM²	BW MM	BS MM	BN/BA MM
				1300	1350	0.787	2200	-2500	-300
				1250	1300	0.687	2200	-3200	-1050
				1200	1250	0.435	2000	-4250	-2250
	Summary Data			1200	1757	11.8	2720	-2100	620
9.1	ENGABREEN	1991	OTH	1500	1596	0.12	3600	-600	3000
	N67011			1400	1500	2.514	3500	-950	2550
				1300	1400	9.35	3350	-850	2500
				1200	1300	8.55	3120	-1750	1370
				1100	1200	7.6	2800	-2250	550
				1000	1100	4.66	2450	-2780	-330
				900	1000	2.46	2070	-3200	-1130
				800	900	0.946	1750	-3650	-1900
				700	800	0.5	1250	-4150	-2900
				600	700	0.37	750	-4750	-4000
				500	600	0.27	200	-5300	-5100
				400	500	0.21	0	-6050	-6050
				300	400	0.17	0	-7400	-7400
				200	300	0.22	0	-8650	-8650
				40	200	0.09	0	-10250	-10250
	Summary Data			40	1596	38	2830	-2140	690
9.2	ENGABREEN	1992	OTH	1500	1596	0.12	5350	-600	4750
	N67011			1400	1500	2.514	5520	-890	4630
				1300	1400	9.35	5150	-1300	3850
				1200	1300	8.55	4360	-1430	2930
				1100	1200	7.6	3780	-1480	2300
				1000	1100	4.66	3300	-1850	1450
				900	1000	2.46	2740	-2140	600
				800	900	0.946	2350	-2620	-270
				700	800	0.5	1750	-3250	-1500
				600	700	0.37	1130	-4010	-2880
				500	600	0.27	580	-4830	-4250
				400	500	0.21	-250	-5350	-5600
				300	400	0.17	-760	-6040	-6800
				200	300	0.22	-1220	-6330	-7550
				40	200	0.09	-1700	-6700	-8400
	Summary Data			40	1596	38	4050	-1410	2340
9.3	ENGABREEN	1993	OTH	1500	1596	0.12	3700	-1150	0
	N67011			1400	1500	2.514	3900	-1280	0
				1300	1400	9.35	3730	-1370	0
				1200	1300	8.55	3280	-1610	0
				1100	1200	7.6	2780	-1960	820
				1000	1100	4.66	2890	-2300	590
				900	1000	2.46	2450	-2880	-430
				800	900	0.946	1950	-3650	-1700
				700	800	0.5	1450	-4420	-2970
				600	700	0.37	950	-5200	-4250
				500	600	0.27	420	-6000	-5580
				400	500	0.21	-50	-6650	-6700
				300	400	0.17	-500	-7200	-7700
				200	300	0.22	-950	-7710	-8660
				40	200	0.09	-1500	-8300	-9800
	Summary Data			40	1596	38	3060	-2020	1040

NR	GLACIER NAME	YEAR	SYS	ALTITUDE FROM	ALTITUDE TO	AREA KM²	BW MM	BS MM	BN/BA MM
9.4	ENGABREEN	1994	OTH	1500	1596	0.12	2300	-750	1510
	N67011			1400	1500	2.514	2400	-900	1500
				1300	1400	9.35	2400	-1100	1300
				1200	1300	8.55	2200	-1350	810
				1100	1200	7.6	1800	-1550	220
				1000	1100	4.66	1700	-1800	-120
				900	1000	2.46	1500	-2100	-610
				800	900	0.946	1200	-2400	-1200
				700	800	0.5	900	-2700	-1800
				600	700	0.37	500	-3000	-2550
				500	600	0.27	0	-3400	-3400
				400	500	0.21	-500	-3850	-4350
				300	400	0.17	-1100	-4300	-5400
				200	300	0.22	-1800	-4750	-6500
				40	200	0.09	-2500	-5200	-7700
	Summary Data			40	1596	38	1950	-1530	420
9.5	ENGABREEN	1995	OTH	1500	1596	0.12	4400	-920	3500
	N67011			1400	1500	2.514	4400	-1050	3400
				1300	1400	9.35	4300	-1250	3100
				1200	1300	8.55	3700	-1480	2200
				1100	1200	7.6	3400	-1830	1500
				1000	1100	4.66	3200	-2040	1200
				900	1000	2.46	2600	-2350	200
				800	900	0.946	1700	-2750	-1000
				700	800	0.5	1300	-3240	-1900
				600	700	0.37	1000	-3820	-2800
				500	600	0.27	700	-4400	-3700
				400	500	0.21	400	-4980	-4600
				300	400	0.17	100	-5520	-5400
				200	300	0.22	-200	-6000	-6200
				40	200	0.09	-500	-6500	-7000
	Summary Data			40	1596	38	3500	-1760	1740
10.1	GRAASUBREEN	1991	OTH	2250	2290	0.037	750	-350	400
	N00547			2200	2250	0.162	730	-450	280
				2150	2200	0.256	570	-800	-230
				2100	2150	0.335	570	-1080	-510
				2050	2100	0.38	640	-1140	-500
				2000	2050	0.414	670	-1350	-680
				1950	2000	0.369	700	-1530	-830
				1900	1950	0.154	810	-1680	-870
				1850	1900	0.092	850	-1770	-920
	Summary Data			1850	2290	2.2	670	-1190	-520
10.2	GRAASUBREEN	1992	OTH	2250	2290	0.037	700	-170	530
	N00547			2200	2250	0.162	770	-470	300
				2150	2200	0.256	610	-560	50
				2100	2150	0.335	560	-680	-120
				2050	2100	0.38	590	-820	-230
				2000	2050	0.414	730	-990	-260
				1950	2000	0.369	850	-1030	-180
				1900	1950	0.154	880	-810	70
				1850	1900	0.092	830	-530	300
	Summary Data			1850	2290	2.2	700	-800	-100

NR	GLACIER NAME	YEAR	SYS	ALTITUDE FROM	ALTITUDE TO	AREA KM²	BW MM	BS MM	BN/BA MM
10.3	GRAASUBREEN	1993	OTH	2250	2290	0.037	680	-80	600
	N00547			2200	2250	0.162	860	-130	730
				2150	2200	0.256	810	-340	470
				2100	2150	0.335	650	-560	90
				2050	2100	0.38	870	-590	280
				2000	2050	0.414	1030	-560	470
				1950	2000	0.369	1140	-600	540
				1900	1950	0.154	1120	-600	520
				1850	1900	0.092	1080	-630	450
	Summary Data			1850	2290	2.2	930	-510	420
10.4	GRAASUBREEN	1994	OTH	2250	2290	0.037	1000	-900	100
	N00547			2200	2250	0.162	1100	-900	200
				2150	2200	0.256	1200	-950	250
				2100	2150	0.335	1300	-1000	250
				2050	2100	0.38	1100	-1100	0
				2000	2050	0.414	1100	-1200	-150
				1950	2000	0.369	1200	-1325	-125
				1900	1950	0.154	1300	-1500	-250
				1850	1900	0.092	1300	-1650	-400
				1850	2290	2.2	1160	-1160	0
10.5	GRAASUBREEN	1995	OTH	2250	2290	0.037	1300	-680	620
	N00547			2200	2250	0.162	1300	-670	650
				2150	2200	0.256	1000	-940	90
				2100	2150	0.335	1000	-1300	-340
				2050	2100	0.38	1200	-1260	-90
				2000	2050	0.414	1100	-1460	-390
				1950	2000	0.369	1300	-1560	-220
				1900	1950	0.154	1600	-1580	-20
				1850	1900	0.092	1600	-1650	-100
	Summary Data			1850	2290	2.2	1190	-1300	-110
11.1	HANSBREEN	1991	STR	450	600	6.71	1230	-180	1050
	N12419			400	450	7.39	1290	-120	1170
				350	400	8.1	1380	-290	1090
				300	350	8.56	1380	-660	720
				250	300	8.25	1040	-1670	-630
				200	250	6.58	1000	-1600	-600
				150	200	5.13	980	-1760	-780
				100	150	3.82	1120	-2460	-1340
				0	100	2.22	240	-2040	-1800
	Summary Data			0	600	56.76	1160	-1030	130
11.2	HANSBREEN	1992	STR	450	600	6.71	1160	-460	700
	N12419			400	450	7.39	1480	-680	800
				350	400	8.1	1280	-1040	240
				300	350	8.56	660	-1010	-350
				250	300	8.25	680	-1190	-510
				200	250	6.58	640	-1400	-760
				150	200	5.13	620	-1690	-1070
				100	150	3.82	580	-1060	-480
				0	100	2.22	200	-2760	-2560
	Summary Data			0	600	56.76	890	-1160	-270

NR	GLACIER NAME	YEAR	SYS	ALTITUDE FROM	ALTITUDE TO	AREA KM²	BW MM	BS MM	BN/BA MM
11.3	HANSBREEN	1993	STR	450	600	6.71	1180	-670	510
	N12419			400	450	7.39	1160	-840	320
				350	400	8.1	1060	-1350	-290
				300	350	8.56	820	-1700	-880
				250	300	8.25	860	-2170	-1310
				200	250	6.58	960	-1860	-900
				150	200	5.13	680	-1820	-1140
				100	150	3.82	700	-2650	-1950
				0	100	2.22	480	-2510	-2030
	Summary Data			0	600	56.76	930	-1610	-680
11.4	HANSBREEN	1994	STR	450	600	6.71	860	-50	810
	N12419			400	450	7.39	1130	-150	980
				350	400	8.1	1060	-270	790
				300	350	8.56	820	-610	210
				250	300	8.25	640	-280	360
				200	250	6.58	600	-870	-270
				150	200	5.13	470	-1030	-560
				100	150	3.82	400	-1440	-1040
				0	100	2.22	130	-1810	-1680
	Summary Data			0	600	56.76	760	-560	200
11.5	HANSBREEN	1995	STR	450	600	6.71	860	-350	510
	N12419			400	450	7.39	1440	-680	760
				350	400	8.1	880	-1150	-270
				300	350	8.56	660	-1080	-420
				250	300	8.25	460	-1500	-1040
				200	250	6.58	580	-1510	-930
				150	200	5.13	890	-1410	-520
				100	150	3.82	360	-1930	-1570
				0	100	2.22	280	-2580	-2300
	Summary Data			0	600	56.76	760	-1210	-450
12.1	HANSEBREEN	1991		1300	1320	0.122	3950	-1850	2100
	N36206			1250	1300	0.504	3900	-2000	1900
				1200	1250	0.55	3800	-2450	1350
				1150	1200	0.541	3650	-2400	1250
				1100	1150	0.722	3200	-2500	700
				1050	1100	0.427	3050	-2800	250
				1000	1050	0.259	2850	-3100	-250
				950	1000	0.158	3000	-3700	-700
				925	950	0.04	3250	-3950	-700
	Summary Data			925	1320	3.323	3451	-2536	915
12.2	HANSEBREEN	1992		1300	1320	0.122	5750	-2750	3000
	N36206			1250	1300	0.504	5720	-2890	2830
				1200	1250	0.55	5680	-3150	2530
				1150	1200	0.541	4600	-3370	1230
				1100	1150	0.722	3560	-3600	-40
				1050	1100	0.427	3100	-3660	-560
				1000	1050	0.259	3200	-3950	-750
				950	1000	0.158	3580	-4360	-780
				925	950	0.04	3900	-4570	-670
	Summary Data			925	1320	3.323	4406	-3432	974

NR	GLACIER NAME	YEAR	SYS	ALTITUDE		AREA	BW	BS	BN/BA
				FROM	TO	KM²	MM	MM	MM
12.3	HANSEBREEN	1993		1300	1320	0.122	4450	-2330	2120
	N36206			1250	1300	0.504	4360	-2530	1830
				1200	1250	0.55	4480	-2800	1680
				1150	1200	0.541	4140	-2240	1900
				1100	1150	0.722	3880	-3300	580
				1050	1100	0.427	3950	-3640	310
				1000	1050	0.259	4480	-3840	640
				950	1000	0.158	4920	-3980	940
				925	950	0.04	4960	-4040	920
				925	1320	3.323	4233	-3019	1214
12.4	HANSEBREEN	1994		1300	1320	0.122	4040	-2080	1960
	N36206			1250	1300	0.504	3820	-2100	1720
				1200	1250	0.55	3550	-2200	1350
				1150	1200	0.541	3200	-2440	760
				1100	1150	0.722	3080	-2960	120
				1050	1100	0.427	3240	-3960	-720
				1000	1050	0.259	3380	-4620	-1240
				950	1000	0.158	3480	-4980	-1500
				925	950	0.04	3520	-5120	-1600
	Summary Data			925	1320	3.323	3393	-2967	426
12.5	HANSEBREEN	1995		1300	1320	0.122	5800	-3050	2750
	N36206			1250	1300	0.504	5380	-3300	2080
				1200	1250	0.55	4800	-3520	1280
				1150	1200	0.541	4320	-3750	570
				1100	1150	0.722	3760	-4050	-290
				1050	1100	0.427	3450	-4280	-830
				1000	1050	0.259	4080	-4620	-540
				950	1000	0.158	4600	-5050	-450
				925	950	0.04	4800	-5400	-600
	Summary Data			925	1320	3.323	4382	-3901	481
13.1	HARDANGERJOEKU	1991	OTH	1850	1860	0.07	1150	-1050	100
	N22303			1800	1850	3.375	1550	-1050	500
				1750	1800	3.866	1800	-1150	650
				1700	1750	3.91	1750	-1250	500
				1650	1700	2.084	1600	-1450	150
				1600	1650	0.936	1400	-1700	-300
				1550	1600	0.64	1200	-1950	-750
				1500	1550	0.542	1000	-2300	-1300
				1450	1500	0.319	850	-2700	-1850
				1400	1450	0.196	700	-3150	-2450
				1350	1400	0.112	650	-3600	-2950
				1300	1350	0.084	550	-4050	-3500
				1250	1300	0.27	500	-4500	-4000
				1200	1250	0.315	450	-5050	-4600
				1150	1200	0.321	450	-5550	-5100
				1100	1150	0.115	400	-6100	-5700
				1050	1100	0.022	400	-6700	-6300
	Summary Data			1050	1860	17.2	1520	-1610	-90
13.2	HARDANGERJOEKU	1992	OTH	1850	1860	0.07	2900	-950	1950
	N22303			1800	1850	3.375	3650	-1000	2650
				1750	1800	3.866	4000	-1250	2750
				1700	1750	3.91	3900	-1450	2450

NR	GLACIER NAME	YEAR	SYS	ALTITUDE FROM	TO	AREA KM²	BW MM	BS MM	BN/BA MM
				1650	1700	2.084	3650	-1700	1950
				1600	1650	0.936	3200	-1950	1250
				1550	1600	0.64	2800	-2200	600
				1500	1550	0.542	2550	-2550	0
				1450	1500	0.319	2300	-2850	-550
				1400	1450	0.196	2150	-3200	-1050
				1350	1400	0.112	2000	-3600	-1600
				1300	1350	0.084	1900	-3950	-2050
				1250	1300	0.27	1800	-4300	-2500
				1200	1250	0.315	1750	-4750	-3000
				1150	1200	0.321	1650	-5200	-3550
				1100	1150	0.115	1600	-5600	-4000
				1050	1100	0.022	1550	-6050	-4500
	Summary Data			1050	1860	17.2	3510	-1720	1790
13.3	HARDANGERJOEKU N22303	1993	OTH	1850	1860	0.07	2250	-500	1750
				1800	1850	3.375	2800	-520	2280
				1750	1800	3.866	3200	-600	2600
				1700	1750	3.91	3150	-700	2450
				1650	1700	2.084	2950	-800	2150
				1600	1650	0.936	2700	-950	1750
				1550	1600	0.64	2450	-1250	1200
				1500	1550	0.542	2150	-1450	700
				1450	1500	0.319	1900	-1700	200
				1400	1450	0.196	1750	-1950	-200
				1350	1400	0.112	1650	-2200	-550
				1300	1350	0.084	1550	-2450	-900
				1250	1300	0.27	1450	-2750	-1300
				1200	1250	0.315	1400	-3000	-1600
				1150	1200	0.321	1350	-3300	-1950
				1100	1150	0.115	1350	-3600	-2250
				1050	1100	0.022	1350	-3900	-2550
	Summary Data			1050	1860	17.2	2820	-910	1910
13.4	HARDANGERJOEKU N22303	1994	OTH	1850	1860	0.07	1500	-1230	270
				1800	1850	3.375	1900	-1230	670
				1750	1800	3.866	2100	-1280	820
				1700	1750	3.91	2000	-1330	670
				1650	1700	2.084	1800	-1380	420
				1600	1650	0.936	1600	-1430	170
				1550	1600	0.64	1300	-1630	-330
				1500	1550	0.542	1300	-1880	-630
				1450	1500	0.319	1100	-2250	-1200
				1400	1450	0.196	1000	-2750	-1750
				1350	1400	0.112	1000	-3350	-2380
				1300	1350	0.084	1000	-3850	-2900
				1250	1300	0.27	900	-4450	-3550
				1200	1250	0.315	900	-5050	-4200
				1150	1200	0.321	800	-5550	-4730
				1100	1150	0.115	800	-6050	-5250
				1050	1100	0.022	800	-6650	-5900
	Summary Data			1050	1860	17.2	1790	-1630	160
13.5	HARDANGERJOEKU N22303	1995	OTH	1850	1860	0.07	2500	-1700	800
				1800	1850	3.375	2700	-1700	1000
				1750	1800	3.866	2700	-1800	900

NR	GLACIER NAME	YEAR	SYS	ALTITUDE FROM	ALTITUDE TO	AREA KM²	BW MM	BS MM	BN/BA MM
				1700	1750	3.91	2600	-1850	800
				1650	1700	2.084	2500	-1950	600
				1600	1650	0.936	2300	-2050	300
				1550	1600	0.64	2200	-2150	0
				1500	1550	0.542	2000	-2500	-500
				1450	1500	0.319	1900	-2900	-1100
				1400	1450	0.196	1700	-3350	-1700
				1350	1400	0.112	1600	-3800	-2200
				1300	1350	0.084	1500	-4250	-2800
				1250	1300	0.27	1300	-4750	-3500
				1200	1250	0.315	1200	-5250	-4100
				1150	1200	0.321	1100	-5750	-4700
				1100	1150	0.115	900	-6250	-5400
				1050	1100	0.022	700	-6750	-6100
	Summary Data			1050	1860	17.2	2440	-2140	300
14.1	HELLSTUGUBREEN	1991	OTH	2150	2200	0.02	1180	-860	320
	N00511			2100	2150	0.084	1210	-890	320
				2050	2100	0.252	1270	-930	340
				2000	2050	0.173	1270	-980	290
				1950	2000	0.351	1130	-1030	100
				1900	1950	0.599	1020	-1120	-100
				1850	1900	0.351	990	-1240	-250
				1800	1850	0.326	910	-1400	-490
				1750	1800	0.141	910	-1700	-790
				1700	1750	0.098	730	-2020	-1290
				1650	1700	0.163	740	-2080	-1340
				1600	1650	0.13	690	-2250	-1560
				1550	1600	0.173	620	-2570	-1950
				1500	1550	0.093	560	-2790	-2230
				1450	1500	0.027	640	-2940	-2300
	Summary Data			1450	2200	3	980	-1430	-450
14.2	HELLSTUGUBREEN	1992	OTH	2150	2200	0.02	1320	-140	1180
	N00511			2100	2150	0.084	1200	-200	1000
				2050	2100	0.252	1180	-260	920
				2000	2050	0.173	1300	-340	960
				1950	2000	0.351	1380	-460	920
				1900	1950	0.599	1180	-560	620
				1850	1900	0.351	1220	-940	280
				1800	1850	0.326	1030	-1330	-300
				1750	1800	0.141	1060	-1620	-560
				1700	1750	0.098	1220	-1700	-480
				1650	1700	0.163	1230	-1850	-620
				1600	1650	0.13	1100	-2030	-930
				1550	1600	0.173	1020	-2260	-1240
				1500	1550	0.093	840	-2600	-1760
				1450	1500	0.027	640	-2820	-2180
	Summary Data			1450	2200	3	1170	-1030	140
14.3	HELLSTUGUBREEN	1993	OTH	2150	2200	0.02	1200	-110	1090
	N00511			2100	2150	0.084	1240	-180	1060
				2050	2100	0.252	1230	-280	950
				2000	2050	0.173	1020	-420	600
				1950	2000	0.351	1350	-550	800
				1900	1950	0.599	1470	-700	770

NR	GLACIER NAME	YEAR	SYS	ALTITUDE FROM	TO	AREA KM²	BW MM	BS MM	BN/BA MM
				1850	1900	0.351	1300	-860	440
				1800	1850	0.326	1150	-980	170
				1750	1800	0.141	1130	-1160	-30
				1700	1750	0.098	1480	-1320	160
				1650	1700	0.163	1530	-1500	30
				1600	1650	0.13	1230	-1690	-460
				1550	1600	0.173	850	-2000	-1150
				1500	1550	0.093	530	-2850	-2320
				1450	1500	0.027	480	-2900	-2420
	Summary Data			1450	2200	3	1250	-950	300
14.4	HELLSTUGUBREEN	1994	OTH	2150	2200	0.02	1600	-400	1150
	N00511			2100	2150	0.084	1600	-400	1150
				2050	2100	0.252	1500	-450	1050
				2000	2050	0.173	1500	-450	1050
				1950	2000	0.351	1500	-500	950
				1900	1950	0.599	1500	-750	700
				1850	1900	0.351	1400	-1250	150
				1800	1850	0.326	1100	-1500	-450
				1750	1800	0.141	1100	-1700	-600
				1700	1750	0.098	1000	-1750	-750
				1650	1700	0.163	1000	-1850	-850
				1600	1650	0.13	900	-2050	-1150
				1550	1600	0.173	800	-2400	-1650
				1500	1550	0.093	600	-2900	-2300
				1450	1500	0.027	500	-3400	-2900
	Summary Data			1450	2200	3	1260	-1190	70
14.5	HELLSTUGUBREEN	1995	OTH	2150	2200	0.02	1380	-430	950
	N00511			2100	2150	0.084	1540	-540	1000
				2050	2100	0.252	1510	-650	860
				2000	2050	0.173	1630	-780	850
				1950	2000	0.351	1820	-940	880
				1900	1950	0.599	1650	-1170	480
				1850	1900	0.351	1430	-1560	-130
				1800	1850	0.326	1320	-1900	-580
				1750	1800	0.141	1420	-2020	-600
				1700	1750	0.098	1150	-2120	-970
				1650	1700	0.163	1230	-2320	-1090
				1600	1650	0.13	960	-2480	-1520
				1550	1600	0.173	800	-2700	-1900
				1500	1550	0.093	560	-3050	-2490
				1450	1500	0.027	500	-3250	-2750
	Summary Data			1450	2200	3	1420	-1540	-120
15.1	LANGFJORDJOEKU	1991	OTH	1000	1065	0.549	2500	-1300	1200
	N85008			900	1000	0.805	2500	-1470	1030
				800	900	0.606	2500	-2000	500
				700	800	0.559	2600	-2050	550
				600	700	0.394	2200	-2500	-300
				500	600	0.348	1900	-2800	-900
				400	500	0.254	1600	-3750	-2150
				300	400	0.136	1200	-4250	-3050
	Summary Data			300	1065	4.8	2310	-2230	80

NR	GLACIER NAME	YEAR	SYS	ALTITUDE FROM	ALTITUDE TO	AREA KM²	BW MM	BS MM	BN/BA MM
15.2	LANGFJORDJOEKU	1992	OTH	1000	1065	0.549	3200	-1850	1350
	N85008			900	1000	0.805	3250	-1650	1600
				800	900	0.606	3300	-1300	2000
				700	800	0.559	2800	-2200	600
				600	700	0.394	2150	-2600	-450
				500	600	0.348	1650	-3300	-1650
				400	500	0.254	1200	-3980	-2780
				300	400	0.136	900	-4580	-3680
	Summary Data			300	1065	4.8	2760	-2480	280
15.3	LANGFJORDJOEKU	1993	OTH	1000	1065	0.549	3150	-1900	1250
	N85008			900	1000	0.805	3100	-2000	1100
				800	900	0.606	2650	-2050	600
				700	800	0.559	2350	-2150	200
				600	700	0.394	2100	-2450	-350
				500	600	0.348	1900	-3050	-1150
				400	500	0.254	1750	-3700	-1950
				300	400	0.136	1650	-4200	-2550
	Summary Data			300	1065	4.8	2470	-2390	80
16.1	NIGARDSBREEN	1991	OTH	1900	1960	0.38	2000	-850	1150
	N31014			1800	1900	3.92	2300	-900	1400
				1700	1800	9.39	2300	-1050	1250
				1600	1700	12.88	2120	-1200	920
				1500	1600	9.18	1800	-1550	250
				1400	1500	5.82	1720	-2150	-430
				1300	1400	2.28	1650	-2750	-1100
				1200	1300	0.9	1550	-3450	-1900
				1100	1200	0.45	1500	-4200	-2700
				1000	1100	0.58	1450	-4050	-2600
				900	1000	0.47	1350	-5250	-3900
				800	900	0.44	1100	-6100	-5000
				700	800	0.33	700	-6700	-6000
				600	700	0.39	400	-7350	-6950
				500	600	0.24	150	-7950	-7800
				400	500	0.12	100	-8700	-8600
				320	400	0.05	100	-9550	-9450
	Summary Data			320	1960	47.8	1950	-1750	200
16.2	NIGARDSBREEN	1992	OTH	1900	1960	0.38	4050	-650	3400
	N31014			1800	1900	3.92	4140	-720	3420
				1700	1800	9.39	4030	-910	3120
				1600	1700	12.88	3470	-1220	2250
				1500	1600	9.18	2730	-1470	1260
				1400	1500	5.82	2430	-1910	520
				1300	1400	2.28	2240	-2310	-70
				1200	1300	0.9	2150	-2800	-650
				1100	1200	0.45	2050	-3330	-1280
				1000	1100	0.58	1960	-2010	-50
				900	1000	0.47	1850	-3220	-1370
				800	900	0.44	1660	-5030	-3370
				700	800	0.33	1350	-5510	-4160
				600	700	0.39	1080	-6030	-4950
				500	600	0.24	800	-6500	-5700
				400	500	0.12	710	-7210	-6500

NR	GLACIER NAME	YEAR	SYS	ALTITUDE FROM	ALTITUDE TO	AREA KM²	BW MM	BS MM	BN/BA MM
				320	400	0.05	570	-7700	-7130
	Summary Data			320	1960	47.8	3160	-1560	1600
16.3	NIGARDSBREEN	1993	OTH	1900	1960	0.38	3650	-350	3300
	N31014			1800	1900	3.92	3950	-350	3600
				1700	1800	9.39	3450	-400	3050
				1600	1700	12.88	3200	-650	2550
				1500	1600	9.18	3100	-1150	1950
				1400	1500	5.82	3050	-1900	1150
				1300	1400	2.28	2700	-2400	300
				1200	1300	0.9	2400	-2950	-550
				1100	1200	0.45	2050	-3600	-1550
				1000	1100	0.58	1750	-3250	-1500
				900	1000	0.47	1550	-4050	-2500
				800	900	0.44	1400	-5850	-4450
				700	800	0.33	1300	-6700	-5400
				600	700	0.39	1200	-7550	-6350
				500	600	0.24	1100	-8350	-7250
				400	500	0.12	1000	-9200	-8200
				320	400	0.05	900	-10000	-9100
	Summary Data			320	1960	47.8	3130	-1280	1850
16.4	NIGARDSBREEN	1994	OTH	1900	1960	0.38	3150	-900	2250
	N31014			1800	1900	3.92	2950	-1000	1950
				1700	1800	9.39	2600	-1200	1400
				1600	1700	12.88	2350	-1350	1000
				1500	1600	9.18	2200	-1550	650
				1400	1500	5.82	2100	-1850	250
				1300	1400	2.28	2000	-2250	-250
				1200	1300	0.9	1800	-2800	-1000
				1100	1200	0.45	1500	-3450	-1950
				1000	1100	0.58	1250	-4150	-2900
				900	1000	0.47	1050	-4850	-3800
				800	900	0.44	1000	-5500	-4500
				700	800	0.33	900	-6150	-5250
				600	700	0.39	800	-6800	-6000
				500	600	0.24	700	-7250	-6550
				400	500	0.12	650	-8150	-7500
				320	400	0.05	550	-8750	-8200
	Summary Data			320	1960	47.8	2280	-1720	560
16.5	NIGARDSBREEN	1995	OTH	1900	1960	0.38	3550	-1100	2450
	N31014			1800	1900	3.92	3700	-1100	2600
				1700	1800	9.39	3450	-1150	2300
				1600	1700	12.88	3350	-1600	1750
				1500	1600	9.18	3100	-1900	1200
				1400	1500	5.82	3000	-2100	900
				1300	1400	2.28	2850	-2550	300
				1200	1300	0.9	2550	-3300	-750
				1100	1200	0.45	2250	-4100	-1850
				1000	1100	0.58	2000	-4850	-2850
				900	1000	0.47	1700	-5650	-3950
				800	900	0.44	1500	-6550	-5050
				700	800	0.33	1300	-7400	-6100
				600	700	0.39	1100	-8200	-7100
				500	600	0.24	950	-8900	-7950

NR	GLACIER NAME	YEAR	SYS	ALTITUDE FROM	ALTITUDE TO	AREA KM²	BW MM	BS MM	BN/BA MM
				400	500	0.12	850	-9600	-8750
				320	400	0.05	750	-10300	-9550
	Summary Data			320	1960	47.8	3160	-1970	1190
17.1	OKSTINDBREEN	1991	OTH	1600	1750	0.21	1500	-900	600
	N64902			1500	1600	1.91	1900	-1100	800
				1400	1500	4.14	2350	-1300	1050
				1300	1400	2.56	2200	-1700	500
				1200	1300	2.56	1200	-3000	-1800
				1100	1200	0.64	700	-3750	-3050
				1000	1100	0.61	1000	-4450	-3450
				900	1000	0.59	1300	-5050	-3750
				800	900	0.61	1100	-5450	-4350
				730	800	0.18	700	-6300	-5600
	Summary Data			730	1750	14	1790	-2300	-510
17.2	OKSTINDBREEN	1992	OTH	1600	1750	0.21	3500	-250	3250
	N64902			1500	1600	1.91	3700	-450	3250
				1400	1500	4.14	3750	-800	2950
				1300	1400	2.56	3200	-1250	1950
				1200	1300	2.56	1750	-2150	-400
				1100	1200	0.64	1450	-3000	-1550
				1000	1100	0.61	1700	-3450	-1750
				900	1000	0.59	2000	-4000	-2000
				800	900	0.61	1700	-4700	-3000
				730	800	0.18	1200	-5200	-4000
	Summary Data			730	1750	14	2880	-1650	1230
17.3	OKSTINDBREEN	1993	OTH	1600	1750	0.21	2200	-600	1600
	N64902			1500	1600	1.91	2800	-850	1950
				1400	1500	4.14	3000	-1150	1850
				1300	1400	2.56	2400	-1450	950
				1200	1300	2.56	1250	-2500	-1250
				1100	1200	0.64	750	-3550	-2800
				1000	1100	0.61	1050	-4050	-3000
				900	1000	0.59	1550	-4550	-3000
				800	900	0.61	1400	-4900	-3500
				730	800	0.18	1900	-5400	-3500
	Summary Data			730	1750	14	2200	-2010	190
17.4	OKSTINDBREEN	1994	OTH	1600	1750	0.21	1800	-300	1500
	N64902			1500	1600	1.91	1900	-400	1500
				1400	1500	4.14	1800	-600	1200
				1300	1400	2.56	1600	-1100	500
				1200	1300	2.56	950	-2300	-1350
				1100	1200	0.64	800	-3250	-2450
				1000	1100	0.61	1050	-3450	-2400
				900	1000	0.59	1100	-3950	-2850
				800	900	0.61	750	-5050	-4300
				730	800	0.18	720	-6300	-5580
	Summary Data			730	1750	14	1450	-1620	-170
17.5	OKSTINDBREEN	1995	OTH	1600	1750	0.21	2250	-230	2020
	N64902			1500	1600	1.91	2700	-450	2250
				1400	1500	4.14	2850	-800	2050
				1300	1400	2.56	2550	-1300	1250

NR	GLACIER NAME	YEAR	SYS	ALTITUDE		AREA	BW	BS	BN/BA
				FROM	TO	KM²	MM	MM	MM
				1200	1300	2.56	1500	-2200	-700
				1100	1200	0.64	1400	-3400	-2000
				1000	1100	0.61	1600	-4150	-2550
				900	1000	0.59	1550	-4650	-3100
				800	900	0.61	1250	-5500	-4250
				730	800	0.18	950	-6200	-5250
	Summary Data			730	1750	14	2250	-1790	460
18.1	SPOERTEGGBREEN	1991	OTH	1750	1770	0.14	1150	-950	200
	N31027			1700	1750	2.736	1400	-1000	400
				1650	1700	3.928	1600	-1050	550
				1600	1650	4.44	1600	-1150	450
				1550	1600	5.302	1500	-1300	200
				1500	1550	4.613	1350	-1450	-100
				1450	1500	3.266	1200	-1650	-450
				1400	1450	1.737	1100	-1850	-750
				1350	1400	0.962	1000	-2050	-1050
				1300	1350	0.651	950	-2300	-1350
				1260	1300	0.16	850	-2550	-1700
	Summary Data			1260	1770	27.9	1400	-1370	30
19.1	STORBREEN	1991	OTH	2050	2100	0.04	1650	-150	1500
	N00541			2000	2050	0.12	1600	-200	1400
				1950	2000	0.22	1550	-300	1250
				1900	1950	0.33	1500	0	1500
				1850	1900	0.51	1450	-600	850
				1800	1850	0.84	1400	-800	600
				1750	1800	0.79	1320	-1050	270
				1700	1750	0.65	1250	-1350	-100
				1650	1700	0.4	1180	-1700	-520
				1600	1650	0.5	1100	-2600	-1500
				1550	1600	0.36	980	-2650	-1670
				1500	1550	0.22	880	-3150	-2270
				1450	1500	0.19	780	-3600	-2820
				1400	1450	0.08	680	-4250	-3570
				1350	1400	0.01	580	-4950	-4370
	Summary Data			1350	2100	5.3	1260	-1410	-150
19.2	STORBREEN	1992	OTH	2050	2100	0.04	2200	-850	1350
	N00541			2000	2050	0.12	2200	-900	1300
				1950	2000	0.22	2000	-900	1100
				1900	1950	0.33	1900	-900	1000
				1850	1900	0.51	1750	-1100	650
				1800	1850	0.84	1650	-1200	450
				1750	1800	0.79	1600	-1350	250
				1700	1750	0.65	1550	-1500	50
				1650	1700	0.4	1500	-1650	-150
				1600	1650	0.5	1500	-1850	-350
				1550	1600	0.36	1400	-2200	-800
				1500	1550	0.22	1350	-2550	-1200
				1450	1500	0.19	1300	-2850	-1550
				1400	1450	0.08	1250	-3300	-2050
				1350	1400	0.01	1250	-3600	-2350
	Summary Data			1350	2100	5.3	1610	-1530	150

NR	GLACIER NAME	YEAR	SYS	ALTITUDE FROM	ALTITUDE TO	AREA KM²	BW MM	BS MM	BN/BA MM
19.3	STORBREEN	1993	OTH	2050	2100	0.04	2200	-200	2000
	N00541			2000	2050	0.12	2200	-250	1950
				1950	2000	0.22	2050	-250	1800
				1900	1950	0.33	2000	-300	1700
				1850	1900	0.51	1900	-400	1500
				1800	1850	0.84	1850	-600	1250
				1750	1800	0.79	1800	-750	1050
				1700	1750	0.65	1750	-1000	750
				1650	1700	0.4	1750	-1250	500
				1600	1650	0.5	1700	-1550	150
				1550	1600	0.36	1700	-2000	-300
				1500	1550	0.22	1650	-2500	-850
				1450	1500	0.19	1650	-2950	-1300
				1400	1450	0.08	1650	-3300	-1650
				1350	1400	0.01	1650	-3600	-1950
	Summary Data			1350	2100	5.3	1810	-1060	750
19.4	STORBREEN	1994	OTH	2050	2100	0.04	2000	-1230	770
	N00541			2000	2050	0.12	1900	-1230	670
				1950	2000	0.22	1800	-1250	550
				1900	1950	0.33	1800	-1300	500
				1850	1900	0.51	1700	-1350	350
				1800	1850	0.84	1500	-1400	100
				1750	1800	0.79	1500	-1600	-100
				1700	1750	0.65	1500	-1750	-250
				1650	1700	0.4	1500	-1900	-400
				1600	1650	0.5	1400	-2100	-700
				1550	1600	0.36	1300	-2350	-1050
				1500	1550	0.22	1300	-2700	-1400
				1450	1500	0.19	1300	-3000	-1700
				1400	1450	0.08	1300	-3300	-2050
				1350	1400	0.01	1300	-3750	-2500
	Summary Data			1350	2100	5.3	1520	-1770	-250
19.5	STORBREEN	1995	OTH	2050	2100	0.04	2300	-750	1570
	N00541			2000	2050	0.12	2300	-920	1360
				1950	2000	0.22	2300	-1080	1170
				1900	1950	0.33	2200	-1290	910
				1850	1900	0.51	2100	-1500	610
				1800	1850	0.84	1800	-1680	160
				1750	1800	0.79	1600	-1870	-270
				1700	1750	0.65	1700	-2040	-380
				1650	1700	0.4	1900	-2140	-220
				1600	1650	0.5	1700	-2250	-520
				1550	1600	0.36	1500	-2450	-920
				1500	1550	0.22	1300	-2700	-1360
				1450	1500	0.19	1100	-3050	-2000
				1400	1450	0.08	900	-3380	-2450
				1350	1400	0.01	900	-3700	-2840
	Summary Data			1350	2100	5.3	1770	-1930	-160
20.1	STORSTEINSFJEL	1991	OTH	1800	1850	0.023	2100	-450	1650
	N07381			1750	1800	0.053	2150	-500	1650
				1700	1750	0.146	2200	-550	1650
				1650	1700	0.176	2250	-600	1650
				1600	1650	0.18	2150	-750	1400

NR	GLACIER NAME	YEAR	SYS	ALTITUDE FROM	ALTITUDE TO	AREA KM²	BW MM	BS MM	BN/BA MM
				1550	1600	0.256	2100	-900	1200
				1500	1550	0.404	1900	-1000	900
				1450	1500	0.521	1850	-1050	800
				1400	1450	0.852	1750	-1100	650
				1350	1400	1.009	1550	-1700	-150
				1300	1350	0.656	1500	-1850	-350
				1250	1300	0.663	1250	-2250	-1000
				1200	1250	0.422	1050	-2600	-1550
				1150	1200	0.236	1000	-2850	-1850
				1100	1150	0.201	950	-3000	-2050
				1050	1100	0.085	900	-3150	-2250
				1000	1050	0.023	850	-3200	-2350
				970	1000	0.007	800	-3250	-2450
	Summary Data			970	1850	5.9	1560	-1600	-40
20.2	STORSTEINSFJEL N07381	1992	OTH	1800	1850	0.023	3400	-350	3050
				1750	1800	0.053	3500	-400	3100
				1700	1750	0.146	3550	-450	3100
				1650	1700	0.176	3350	-500	2850
				1600	1650	0.18	3250	-550	2700
				1550	1600	0.256	3050	-600	2450
				1500	1550	0.404	2750	-700	2050
				1450	1500	0.521	2650	-800	1850
				1400	1450	0.852	2200	-900	1300
				1350	1400	1.009	2100	-1000	1100
				1300	1350	0.656	2050	-1100	950
				1250	1300	0.663	1850	-1500	350
				1200	1250	0.422	1450	-1800	-350
				1150	1200	0.236	1350	-1950	-600
				1100	1150	0.201	1100	-2000	-900
				1050	1100	0.085	1000	-2050	-1050
				1000	1050	0.023	950	-2100	-1150
				970	1000	0.007	900	-2150	-1250
	Summary Data			970	1850	5.9	2070	-1030	1040
20.3	STORSTEINSFJEL N07381	1993	OTH	1800	1850	0.023	2850	-350	2500
				1750	1800	0.053	2900	-450	2450
				1700	1750	0.146	3100	-550	2550
				1650	1700	0.176	2850	-650	2200
				1600	1650	0.18	2800	-750	2050
				1550	1600	0.256	2750	-800	1950
				1500	1550	0.404	2500	-900	1600
				1450	1500	0.521	2400	-1050	1350
				1400	1450	0.852	2150	-1150	1000
				1350	1400	1.009	2100	-1200	900
				1300	1350	0.656	2000	-1200	800
				1250	1300	0.663	1700	-1500	200
				1200	1250	0.422	1500	-2000	-500
				1150	1200	0.236	1450	-2250	-800
				1100	1150	0.201	1350	-2450	-1100
				1050	1100	0.085	1250	-2550	-1300
				1000	1050	0.023	1200	-2700	-1500
				970	1000	0.007	1150	-2750	-1600
	Summary Data			970	1850	5.9	2170	-1220	950

NR	GLACIER NAME	YEAR	SYS	ALTITUDE FROM	ALTITUDE TO	AREA KM²	BW MM	BS MM	BN/BA MM
20.4	STORSTEINSFJEL	1994	OTH	1800	1850	0.023	1000	-400	600
	N07381			1750	1800	0.053	1050	-450	600
				1700	1750	0.146	1150	-500	650
				1650	1700	0.176	1300	-600	700
				1600	1650	0.18	1550	-750	800
				1550	1600	0.256	1550	-900	650
				1500	1550	0.404	1450	-950	500
				1450	1500	0.521	1300	-1000	300
				1400	1450	0.852	1150	-1050	100
				1350	1400	1.009	1150	-1150	0
				1300	1350	0.656	1200	-1400	-200
				1250	1300	0.663	1000	-1750	-750
				1200	1250	0.422	850	-2200	-1350
				1150	1200	0.236	800	-2400	-1600
				1100	1150	0.201	700	-2600	-1900
				1050	1100	0.085	550	-2750	-2200
				1000	1050	0.023	450	-2900	-2450
				970	1000	0.007	350	-3050	-2700
	Summary Data			970	1850	5.9	1140	-1350	-210
20.5	STORSTEINSFJEL	1995	OTH	1800	1850	0.023	2150	-300	1850
	N07381			1750	1800	0.053	2200	-350	1850
				1700	1750	0.146	2250	-400	1850
				1650	1700	0.176	2250	-450	1800
				1600	1650	0.18	2400	-600	1800
				1550	1600	0.256	2450	-700	1750
				1500	1550	0.404	2300	-850	1450
				1450	1500	0.521	2000	-950	1050
				1400	1450	0.852	1850	-1050	800
				1350	1400	1.009	1850	-1100	750
				1300	1350	0.656	1750	-1250	500
				1250	1300	0.663	1600	-1700	-100
				1200	1250	0.422	1250	-2050	-800
				1150	1200	0.236	1200	-2150	-950
				1100	1150	0.201	1200	-2250	-1050
				1050	1100	0.085	900	-2300	-1400
				1000	1050	0.023	700	-2350	-1650
				970	1000	0.007	600	-2400	-1800
	Summary Data			970	1850	5.9	1810	-1240	570
21.1	SVARTISHEIBREE	1991	OTH	1400	1420	0.01	2350	-1100	1250
	N65509			1350	1400	0.14	2450	-1150	1300
				1300	1350	0.25	2550	-1200	1350
				1250	1300	0.37	2700	-1250	1450
				1200	1250	0.33	2900	-1350	1550
				1150	1200	0.36	3100	-1450	1650
				1100	1150	0.34	3250	-1550	1700
				1050	1100	0.35	3250	-1700	1550
				1000	1050	1.07	3050	-1900	1150
				950	1000	0.63	2700	-2250	450
				900	950	0.54	2350	-2900	-550
				850	900	0.31	2050	-3850	-1800
				800	850	0.35	1650	-4900	-3250
				770	800	0.43	1250	-5600	-4350
	Summary Data			770	1420	5.5	2610	-2440	170

NR	GLACIER NAME	YEAR	SYS	ALTITUDE FROM	ALTITUDE TO	AREA KM²	BW MM	BS MM	BN/BA MM
21.2	SVARTISHEIBREE	1992	OTH	1400	1420	0.01	3500	-2250	1250
	N65509			1350	1400	0.14	3600	-2250	1350
				1300	1350	0.25	3750	-2250	1500
				1250	1300	0.37	3950	-2250	1700
				1200	1250	0.33	4150	-2250	1900
				1150	1200	0.36	4350	-2250	2100
				1100	1150	0.34	4550	-2250	2300
				1050	1100	0.35	4600	-2250	2350
				1000	1050	1.07	4450	-2400	2050
				950	1000	0.63	4150	-2550	1600
				900	950	0.54	3800	-2850	950
				850	900	0.31	2900	-3300	-400
				800	850	0.35	2400	-3750	-1350
				770	800	0.43	2550	-4150	-1600
	Summary Data			770	1420	5.5	3890	-2680	1210
21.3	SVARTISHEIBREE	1993	OTH	1400	1420	0.01	3400	-1700	1700
	N65509			1350	1400	0.14	3450	-1750	1700
				1300	1350	0.25	3500	-1800	1700
				1250	1300	0.37	3600	-1850	1750
				1200	1250	0.33	3750	-1900	1850
				1150	1200	0.36	3850	-1950	1900
				1100	1150	0.34	3800	-2000	1800
				1050	1100	0.35	3750	-2050	1700
				1000	1050	1.07	3650	-2200	1450
				950	1000	0.63	3550	-2400	1150
				900	950	0.54	3450	-3200	250
				850	900	0.31	3300	-3800	-500
				800	850	0.35	3000	-4050	-1050
				770	800	0.43	2700	-4300	-1600
	Summary Data			770	1420	5.5	3500	-2590	910
21.4	SVARTISHEIBREE	1994	OTH	1400	1420	0.01	1900	-900	1000
	N65509			1350	1400	0.14	1950	-950	1000
				1300	1350	0.25	2000	-1000	1000
				1250	1300	0.37	2050	-1050	1000
				1200	1250	0.33	2050	-1100	950
				1150	1200	0.36	2000	-1150	850
				1100	1150	0.34	1900	-1200	700
				1050	1100	0.35	1900	-1350	550
				1000	1050	1.07	1950	-1500	450
				950	1000	0.63	1950	-1950	0
				900	950	0.54	1800	-2500	-700
				850	900	0.31	1500	-2900	-1400
				800	850	0.35	1250	-3250	-2000
				770	800	0.43	1300	-3500	-2200
	Summary Data			770	1420	5.5	1830	-1850	-20
22.1	TROLLBERGDALSB	1991	OTH	1250	1270	0.01	2800	-1450	1350
	N68507			1200	1250	0.08	2650	-1500	1150
				1150	1200	0.17	2600	-1600	1000
				1100	1150	0.13	3050	-1900	1150
				1050	1100	0.56	2300	-2200	100
				1000	1050	0.62	2050	-2500	-450
				950	1000	0.2	2250	-2950	-700

NR	GLACIER NAME	YEAR	SYS	ALTITUDE		AREA	BW	BS	BN/BA
				FROM	TO	KM²	MM	MM	MM
				900	950	0.06	2650	-3600	-950
	Summary Data			900	1270	1.8	2325	-2325	0
22.2	TROLLBERGDALSB	1992	OTH	1250	1270	0.01	3100	-1100	2000
	N68507			1200	1250	0.08	3000	-1200	1800
				1150	1200	0.17	2950	-1450	1500
				1100	1150	0.13	2800	-1700	1100
				1050	1100	0.56	2600	-2000	600
				1000	1050	0.62	2400	-2250	150
				950	1000	0.2	2750	-2450	300
				900	950	0.06	3300	-2500	800
	Summary Data			900	1270	1.8	2650	-2050	600
22.3	TROLLBERGDALSB	1993	OTH	1250	1270	0.01	2400	-1300	1100
	N68507			1200	1250	0.08	2400	-1350	1050
				1150	1200	0.17	2400	-1400	1000
				1100	1150	0.13	2850	-1900	950
				1050	1100	0.56	2850	-2350	500
				1000	1050	0.62	2250	-2550	-300
				950	1000	0.2	2350	-2650	-300
				900	950	0.06	2900	-2950	-50
	Summary Data			900	1270	1.8	2520	-2310	210
22.4	TROLLBERGDALSB	1994	OTH	1250	1270	0.01	1800	-1450	350
	N68507			1200	1250	0.08	1750	-1550	200
				1150	1200	0.17	1650	-1700	-50
				1100	1150	0.13	1500	-1950	-450
				1050	1100	0.56	1650	-2250	-600
				1000	1050	0.62	1450	-2700	-1250
				950	1000	0.2	1350	-3150	-1800
				900	950	0.06	1450	-3450	-2000
	Summary Data			900	1270	1.8	1490	-2590	-1100
	SWEDEN								
23.1	RABOTS GLACIAE	1991	COM	1920	1940	0.001	2250	-750	1500
	S00785			1900	1920	0.004	2250	-750	1500
				1880	1900	0.004	2250	-750	1500
				1860	1880	0.005	2250	-750	1500
				1840	1860	0.006	2250	-750	1500
				1820	1840	0.006	2250	-750	1500
				1800	1820	0.006	2250	-750	1500
				1780	1800	0.007	2250	-750	1500
				1760	1780	0.011	2250	-750	1500
				1740	1760	0.019	2250	-750	1500
				1720	1740	0.024	2250	-750	1500
				1700	1720	0.024	2250	-750	1500
				1680	1700	0.029	2250	-750	1500
				1660	1680	0.027	2250	-750	1500
				1640	1660	0.035	2250	-750	1500
				1620	1640	0.048	2250	-750	1500
				1600	1620	0.054	2250	-750	1500
				1580	1600	0.062	2250	-1218	1032
				1560	1580	0.091	2212	-1211	1000
				1540	1560	0.104	2115	-1210	905
				1520	1540	0.168	1961	-1214	747
				1500	1520	0.199	1773	-1270	503

NR	GLACIER NAME	YEAR	SYS	ALTITUDE FROM	TO	AREA KM²	BW MM	BS MM	BN/BA MM
				1480	1500	0.174	1635	-1435	200
				1460	1480	0.152	1559	-1405	155
				1440	1460	0.134	1619	-1473	146
				1420	1440	0.116	1634	-1487	147
				1400	1420	0.104	1716	-1472	245
				1380	1400	0.195	1801	-1342	459
				1360	1380	0.271	1661	-1452	210
				1340	1360	0.262	1548	-1691	-143
				1320	1340	0.145	1240	-1822	-583
				1300	1320	0.12	1092	-1907	-815
				1280	1300	0.193	1291	-2038	-746
				1260	1280	0.221	1255	-2064	-809
				1240	1260	0.194	1034	-2098	-1065
				1220	1240	0.174	1069	-2199	-1130
				1200	1220	0.125	954	-2330	-1376
				1180	1200	0.097	773	-2683	-1910
				1160	1180	0.081	741	-2978	-2237
				1140	1160	0.065	593	-3319	-2726
				1120	1140	0.049	486	-3556	-3070
				1100	1120	0.034	606	-3382	-2776
				1080	1100	0.023	750	-3250	-2500
				1060	1080	0.007	750	-3250	-2500
	Summary Data			1060	1940	3.82	1508	-1710	-202
23.2	RABOTS GLACIAE	1992	COM	1920	1940	0.001	2510	-755	1755
	S00785			1900	1920	0.004	2510	-755	1755
				1880	1900	0.003	2505	-759	1746
				1860	1880	0.004	2505	-759	1746
				1840	1860	0.005	2505	-764	1741
				1820	1840	0.004	2505	-770	1734
				1800	1820	0.004	2505	-770	1734
				1780	1800	0.004	2504	-782	1721
				1760	1780	0.005	2504	-782	1721
				1740	1760	0.013	2502	-791	1711
				1720	1740	0.021	2501	-796	1705
				1700	1720	0.021	2501	-796	1705
				1680	1700	0.025	2428	-807	1621
				1660	1680	0.024	2428	-807	1621
				1640	1660	0.032	2413	-813	1601
				1620	1640	0.045	2400	-818	1581
				1600	1620	0.05	2400	-818	1581
				1580	1600	0.065	2270	-829	1441
				1560	1580	0.083	2240	-842	1398
				1540	1560	0.099	2190	-852	1338
				1520	1540	0.162	2100	-864	1236
				1500	1520	0.211	2030	-876	1154
				1480	1500	0.181	1920	-887	1033
				1460	1480	0.148	1830	-926	904
				1440	1460	0.126	1840	-1111	729
				1420	1440	0.109	1860	-1127	733
				1400	1420	0.103	1790	-1108	682
				1380	1400	0.216	1880	-1071	809
				1360	1380	0.27	1780	-1316	464
				1340	1360	0.235	1640	-1448	192
				1320	1340	0.138	1460	-1478	-18
				1300	1320	0.135	1460	-1490	-30

NR	GLACIER NAME	YEAR	SYS	ALTITUDE		AREA	BW	BS	BN/BA
				FROM	TO	KM²	MM	MM	MM
				1280	1300	0.213	1390	-1501	-111
				1260	1280	0.223	1260	-1773	-513
				1240	1260	0.196	1210	-2273	-1063
				1220	1240	0.17	1100	-2447	-1347
				1200	1220	0.128	980	-2784	-1804
				1180	1200	0.09	910	-3268	-2358
				1160	1180	0.09	880	-3480	-2600
				1140	1160	0.065	870	-3581	-2711
				1120	1140	0.047	880	-3592	-2712
				1100	1120	0.037	870	-3604	-2734
				1080	1100	0.018	880	-3612	-2732
	Summary Data			1080	1940	3.82	1650	-1540	110
23.3	RABOTS GLACIAE	1993	COM	1920	1940	0.001	3347	-733	2614
	S00785			1900	1920	0.004	3344	-733	2612
				1880	1900	0.003	3354	-721	2633
				1860	1880	0.004	3355	-721	2633
				1840	1860	0.005	3353	-721	2632
				1820	1840	0.004	3353	-721	2632
				1800	1820	0.004	3353	-721	2632
				1780	1800	0.004	3355	-722	2633
				1760	1780	0.005	3350	-722	2628
				1740	1760	0.013	3255	-725	2530
				1720	1740	0.021	3200	-726	2475
				1700	1720	0.021	3201	-726	2475
				1680	1700	0.025	2898	-726	2172
				1660	1680	0.024	2898	-726	2172
				1640	1660	0.032	2828	-726	2102
				1620	1640	0.045	2763	-725	2038
				1600	1620	0.05	2763	-725	2038
				1580	1600	0.065	2786	-724	2062
				1560	1580	0.083	2707	-725	1982
				1540	1560	0.099	2682	-726	1956
				1520	1540	0.162	2620	-725	1895
				1500	1520	0.211	2575	-725	1851
				1480	1500	0.181	2042	-725	1317
				1460	1480	0.148	1837	-885	953
				1440	1460	0.126	2021	-975	1046
				1420	1440	0.109	1994	-975	1018
				1400	1420	0.103	2074	-1225	849
				1380	1400	0.216	2305	-1295	1011
				1360	1380	0.27	2105	-1507	597
				1340	1360	0.235	1727	-1631	96
				1320	1340	0.138	1203	-1716	-513
				1300	1320	0.135	1566	-1725	-159
				1280	1300	0.213	1588	-1725	-137
				1260	1280	0.223	1386	-1874	-489
				1240	1260	0.196	1126	-2042	-915
				1220	1240	0.17	1101	-2016	-915
				1200	1220	0.128	1095	-1949	-854
				1180	1200	0.09	998	-1725	-726
				1160	1180	0.09	878	-1725	-847
				1140	1160	0.065	850	-1725	-874
				1120	1140	0.047	850	-1725	-875
				1100	1120	0.037	849	-1724	-875

NR	GLACIER NAME	YEAR	SYS	ALTITUDE FROM	ALTITUDE TO	AREA KM²	BW MM	BS MM	BN/BA MM
				1080	1100	0.018	853	-1724	-871
	Summary Data			1080	1940	3.82	1860	-1350	510
23.4	RABOTS GLACIAE	1994	COM	1920	1940	0.001	1401	-151	1250
	S00785			1900	1920	0.004	1401	-151	1250
				1880	1900	0.004	1401	-151	1250
				1860	1880	0.005	1401	-151	1250
				1840	1860	0.006	1382	-151	1231
				1820	1840	0.006	1380	-151	1229
				1800	1820	0.006	1380	-151	1229
				1780	1800	0.007	1384	-151	1233
				1760	1780	0.011	1390	-151	1239
				1740	1760	0.019	1394	-151	1243
				1720	1740	0.024	1391	-151	1240
				1700	1720	0.024	1386	-151	1235
				1680	1700	0.029	1354	-401	953
				1660	1680	0.027	1369	-401	968
				1640	1660	0.035	1362	-401	961
				1620	1640	0.048	1362	-401	961
				1600	1620	0.054	1321	-401	920
				1580	1600	0.062	1299	-401	898
				1560	1580	0.09	1284	-629	655
				1540	1560	0.1	1172	-651	521
				1520	1540	0.167	1102	-651	451
				1500	1520	0.199	995	-654	342
				1480	1500	0.176	897	-664	233
				1460	1480	0.152	852	-722	130
				1440	1460	0.132	892	-786	106
				1420	1440	0.116	944	-901	43
				1400	1420	0.105	951	-901	50
				1380	1400	0.196	998	-901	97
				1360	1380	0.269	988	-909	79
				1340	1360	0.263	959	-962	-3
				1320	1340	0.145	834	-1056	-222
				1300	1320	0.122	747	-1122	-375
				1280	1300	0.194	803	-1076	-273
				1260	1280	0.221	796	-1192	-397
				1240	1260	0.199	733	-1344	-611
				1220	1240	0.177	757	-1542	-785
				1200	1220	0.125	673	-1699	-1026
				1180	1200	0.096	589	-1849	-1260
				1160	1180	0.082	499	-1965	-1467
				1140	1160	0.065	455	-2101	1646
				1120	1140	0.049	401	-2151	-1750
				1100	1120	0.034	401	-2291	-1890
				1080	1100	0.023	401	-2401	-2000
				1060	1080	0.007	401	-2401	-2000
	Summary Data			1060	1940	3.88	910	-1010	-100
23.5	RABOTS GLACIAE	1995	COM	1920	1940	0.001	2375	-250	2125
	S00785			1900	1920	0.004	2375	-250	2125
				1880	1900	0.004	2375	-250	2125
				1860	1880	0.005	2375	-250	2125
				1840	1860	0.006	2375	-250	2125
				1820	1840	0.006	2375	-250	2125
				1800	1820	0.006	2375	-250	2125

NR	GLACIER NAME	YEAR	SYS	ALTITUDE FROM	ALTITUDE TO	AREA KM²	BW MM	BS MM	BN/BA MM
				1780	1800	0.007	2375	-250	2125
				1760	1780	0.011	2375	-250	2125
				1740	1760	0.019	2151	-250	1901
				1720	1740	0.024	2167	-250	1917
				1700	1720	0.024	2186	-250	1936
				1680	1700	0.029	2194	-250	1944
				1660	1680	0.027	2225	-250	1975
				1640	1660	0.035	2231	-250	1981
				1620	1640	0.048	2213	-250	1963
				1600	1620	0.054	2208	-250	1958
				1580	1600	0.062	2183	-315	1869
				1560	1580	0.09	2172	-750	1422
				1540	1560	0.1	2048	-750	1298
				1520	1540	0.167	1942	-750	1192
				1500	1520	0.199	1882	-750	1132
				1480	1500	0.177	1624	-750	874
				1460	1480	0.152	1439	-1115	324
				1440	1460	0.132	1419	-1231	188
				1420	1440	0.116	1507	-1250	257
				1400	1420	0.105	1566	-1250	316
				1380	1400	0.196	1557	-1250	307
				1360	1380	0.269	1536	-1311	225
				1340	1360	0.263	1388	-1406	-19
				1320	1340	0.145	1144	-1694	-550
				1300	1320	0.122	1174	-1672	-498
				1280	1300	0.194	1231	-1613	-382
				1260	1280	0.221	1142	-1688	-546
				1240	1260	0.199	1006	-1947	-940
				1220	1240	0.177	985	-2076	-1090
				1200	1220	0.125	939	-2250	-1311
				1180	1200	0.096	883	-2250	-1367
				1160	1180	0.082	894	-2528	-1634
				1140	1160	0.065	809	-2750	-1941
				1120	1140	0.049	717	-2750	-2033
				1100	1120	0.034	669	-2750	-2081
				1080	1100	0.023	625	-2750	-2125
				1060	1080	0.007	625	-2750	-2125
	Summary Data			1060	1940	3.88	1450	-1370	80
24.1	STORGLACIAEREN	1991	COM	1700	1720	0.012	2480	-40	2440
	S00788			1680	1700	0.06	2740	-150	2590
				1660	1680	0.086	3730	-230	3500
				1640	1660	0.114	2980	-380	2590
				1620	1640	0.149	3040	-490	2560
				1600	1620	0.122	2670	-600	2070
				1580	1600	0.139	2420	-720	1700
				1560	1580	0.119	1970	-830	1140
				1540	1560	0.086	1890	-950	940
				1520	1540	0.102	1910	-1050	860
				1500	1520	0.186	2290	-1170	1120
				1480	1500	0.165	1810	-1270	540
				1460	1480	0.093	1380	-1390	0
				1440	1460	0.064	1520	-1500	20
				1420	1440	0.072	1720	-1620	100
				1400	1420	0.115	1490	-1760	-260
				1380	1400	0.22	1000	-1880	-870

NR	GLACIER NAME	YEAR	SYS	ALTITUDE FROM	ALTITUDE TO	AREA KM²	BW MM	BS MM	BN/BA MM
				1360	1380	0.267	910	-1990	-1070
				1340	1360	0.251	760	-2100	-1340
				1320	1340	0.149	760	-2210	-1460
				1300	1320	0.091	1050	-2330	-1280
				1280	1300	0.079	990	-2460	-1460
				1260	1280	0.073	880	-2560	-1680
				1240	1260	0.074	990	-2680	-1680
				1220	1240	0.053	1210	-2800	-1590
				1200	1220	0.04	1320	-2920	-1590
				1180	1200	0.014	1500	-3010	-1500
				1160	1180	0.016	1560	-3120	-1560
				1140	1160	0.009	2220	-3260	-1040
	Summary Data			1140	1720	3.01	1680	-1510	170
24.2	STORGLACIAEREN	1992	COM	1700	1720	0.02	4752	-376	4376
	S00788			1680	1700	0.053	3678	-382	3296
				1660	1680	0.091	3917	-390	3528
				1640	1660	0.12	3990	-396	3594
				1620	1640	0.145	3794	-403	3391
				1600	1620	0.135	3573	-410	3163
				1580	1600	0.133	3213	-667	2545
				1560	1580	0.117	2884	-675	2210
				1540	1560	0.1	2635	-681	1954
				1520	1540	0.103	2722	-862	1860
				1500	1520	0.178	2883	-891	1992
				1480	1500	0.168	2311	-1126	1185
				1460	1480	0.092	1971	-1414	557
				1440	1460	0.064	2065	-1455	609
				1420	1440	0.07	2391	-1413	978
				1400	1420	0.102	2046	-1607	439
				1380	1400	0.217	1548	-1767	-218
				1360	1380	0.269	1245	-1836	-591
				1340	1360	0.151	1025	-2013	-989
				1320	1340	0.149	1049	-2097	-1048
				1300	1320	0.087	1360	-2149	-789
				1280	1300	0.078	1430	-2123	-693
				1260	1280	0.086	1056	-2247	-1191
				1240	1260	0.069	1189	-2377	-1188
				1220	1240	0.052	1386	-2417	-1031
				1200	1220	0.04	1675	-2437	-762
				1180	1200	0.021	2082	-2405	-323
				1160	1180	0.011	2250	-2315	-65
				1140	1160	0.009	2250	-2322	-72
	Summary Data			1140	1720	3.01	2235	-1356	880
24.3	STORGLACIAEREN	1993	COM	1700	1720	0.42	4250	-630	2630
	S00788			1680	1700	0.74	3730	-630	3100
				1660	1680	0.106	3840	-630	3210
				1640	1660	0.144	3940	-630	3310
				1620	1640	0.152	3390	-670	2720
				1600	1620	0.117	3330	-820	2520
				1580	1600	0.123	3290	-940	2350
				1560	1580	0.765	2990	-870	2120
				1540	1560	0.103	2760	-990	1780
				1520	1540	0.105	3070	-1000	2070
				1500	1520	0.223	3210	-980	2230

NR	GLACIER NAME	YEAR	SYS	ALTITUDE		AREA	BW	BS	BN/BA
				FROM	TO	KM²	MM	MM	MM
				1480	1500	0.15	2300	-1170	114
				1460	1480	0.085	1940	-1350	580
				1440	1460	0.061	2020	1280	750
				1420	1440	0.073	2070	-1330	740
				1400	1420	0.125	1790	-1450	340
				1380	1400	0.237	1300	-1500	-200
				1360	1380	0.28	1260	-1470	-210
				1340	1360	0.25	940	-1600	-660
				1320	1340	0.143	1120	-1600	-490
				1300	1320	0.098	1500	-1600	-90
				1280	1300	0.081	1270	-1700	-440
				1260	1280	0.081	1010	-1880	-880
				1240	1260	0.066	1450	-2000	-550
				1220	1240	0.055	1690	-1960	-260
				1200	1220	0.037	1770	-1880	-100
				1180	1200	0.018	2030	-1880	150
				1160	1180	0.01	2530	-1880	650
				1140	1160	0.004	2750	-1880	880
	Summary Data			1140	1720	3.12	2250	-1250	1000
24.4	STORGLACIAEREN	1994	COM	1700	1720	0.029	2270	-570	1700
	S00788			1680	1700	0.059	2000	-600	1390
				1660	1680	0.077	2170	-680	1490
				1640	1660	0.134	2110	-730	1380
				1620	1640	0.152	1980	-790	1190
				1600	1620	0.136	1700	-870	840
				1580	1600	0.142	1410	-950	460
				1560	1580	0.106	1230	-990	250
				1540	1560	0.097	1160	-1160	-1
				1520	1540	0.103	1260	-1150	110
				1500	1520	0.225	1370	-1070	300
				1480	1500	0.145	880	-1300	-430
				1460	1480	0.087	750	-1550	-800
				1440	1460	0.064	950	-1530	-580
				1420	1440	0.076	1070	-1470	-400
				1400	1420	0.116	850	-1620	-770
				1380	1400	0.235	550	-1740	-1190
				1360	1380	0.277	500	-1740	-1240
				1340	1360	0.245	390	-1740	-1360
				1320	1340	0.144	520	-1840	-1320
				1300	1320	0.094	810	-1750	-940
				1280	1300	0.083	680	-2040	-1360
				1260	1280	0.084	600	-2210	-1610
				1240	1260	0.064	840	-2300	-1470
				1220	1240	0.051	940	-2460	-1520
				1200	1220	0.035	1000	-2640	-1640
				1180	1200	0.017	1230	-2710	-1490
				1160	1180	0.007	1410	-2660	-1250
				1140	1160	0.003	1580	-2630	-1040
	Summary Data			1140	1720	3.1	1060	-1430	-370
24.5	STORGLACIAEREN	1995	COM	1700	1720	0.029	3670	-240	3430
	S00788			1680	1700	0.059	3770	-230	3540
				1660	1680	0.077	3690	-280	3410
				1640	1660	0.134	3610	-300	3320
				1620	1640	0.152	3370	-410	2970

NR	GLACIER NAME	YEAR	SYS	ALTITUDE FROM	TO	AREA KM²	BW MM	BS MM	BN/BA MM
				1600	1620	0.136	2960	-580	2380
				1580	1600	0.142	2680	-640	2040
				1560	1580	0.106	2410	-670	1750
				1540	1560	0.097	2280	-770	1500
				1520	1540	0.103	2320	-780	1540
				1500	1520	0.225	2230	-490	1740
				1480	1500	0.145	1660	-1320	340
				1460	1480	0.087	1350	-1120	230
				1440	1460	0.064	1640	-1180	450
				1420	1440	0.076	1910	-1270	640
				1400	1420	0.116	1690	-1430	260
				1380	1400	0.235	1260	-1590	-330
				1360	1380	0.277	1180	-1470	-290
				1340	1360	0.245	930	-1710	-780
				1320	1340	0.144	980	-2010	-1030
				1300	1320	0.094	1460	-2130	-670
				1280	1300	0.083	1170	-2260	-1090
				1260	1280	0.084	1020	-2340	-1320
				1240	1260	0.064	1310	-2440	-1130
				1220	1240	0.051	1350	-2550	-1190
				1200	1220	0.035	1310	-2590	-1290
				1180	1200	0.017	1400	-2840	-1440
				1160	1180	0.008	1500	-2880	-1380
				1140	1160	0.003	1630	-2880	-1250
	Summary Data			1140	1720	3.1	1930	-1230	700
	SWITZERLAND								
25.1	GRIES (AEGINA)	1962	FXD	3300	3400	0.009			780
	CH00003			3200	3300	0.133			750
				3100	3200	0.533			360
				3000	3100	1.574			10
				2900	3000	1.015			-140
				2800	2900	0.752			-420
				2700	2800	0.605			-910
				2600	2700	1.082			-1890
				2500	2600	0.563			-2750
				2400	2500	0.297			-3350
	Summary Data			2400	3400	6.69			-850
25.2	GRIES (AEGINA)	1963	FXD	3300	3400	0.009			1780
	CH00003			3200	3300	0.133			1750
				3100	3200	0.533			1680
				3000	3100	1.574			1340
				2900	3000	1.015			1010
				2800	2900	0.752			750
				2700	2800	0.605			-110
				2600	2700	1.082			-1170
				2500	2600	0.563			-1790
				2400	2500	0.297			-2870
	Summary Data			2400	3400	6.69			200
25.3	GRIES (AEGINA)	1964	FXD	3300	3400	0.009			780
	CH00003			3200	3300	0.133			730
				3100	3200	0.533			630
				3000	3100	1.574			290
				2900	3000	1.015			-430

NR	GLACIER NAME	YEAR	SYS	ALTITUDE FROM	ALTITUDE TO	AREA KM²	BW MM	BS MM	BN/BA MM
				2800	2900	0.752			-890
				2700	2800	0.605			-1300
				2600	2700	1.082			-1940
				2500	2600	0.563			-2950
				2400	2500	0.297			-3930
	Summary Data			2400	3400	6.69			-990
25.4	GRIES (AEGINA)	1965	FXD	3300	3400	0.009			2240
	CH00003			3200	3300	0.133			2230
				3100	3200	0.533			1600
				3000	3100	1.574			1520
				2900	3000	1.015			1300
				2800	2900	0.752			960
				2700	2800	0.605			520
				2600	2700	1.082			-270
				2500	2600	0.563			-490
				2400	2500	0.297			-1390
	Summary Data			2400	3400	6.69			690
25.5	GRIES (AEGINA)	1966	FXD	3300	3400	0.009			1220
	CH00003			3200	3300	0.133			1250
				3100	3200	0.533			1120
				3000	3100	1.574			620
				2900	3000	1.015			420
				2800	2900	0.752			460
				2700	2800	0.605			-120
				2600	2700	1.082			-740
				2500	2600	0.563			-1380
				2400	2500	0.297			-2730
	Summary Data			2400	3400	6.69			20
25.6	GRIES (AEGINA)	1967	FXD	3300	3400	0.009			1790
	CH00003			3200	3300	0.133			1750
				3100	3200	0.533			1300
				3000	3100	1.574			980
				2900	3000	1.015			800
				2800	2900	0.752			840
				2700	2800	0.605			550
				2600	2700	1.082			-430
				2500	2600	0.563			-1030
				2400	2500	0.297			-2170
	Summary Data			2400	3400	6.69			400
25.7	GRIES (AEGINA)	1968	FXD	3300	3400	0.009			1790
	CH00003			3200	3300	0.133			1700
				3100	3200	0.533			1330
				3000	3100	1.574			1240
				2900	3000	1.015			1260
				2800	2900	0.752			830
				2700	2800	0.605			510
				2600	2700	1.082			-210
				2500	2600	0.563			-720
				2400	2500	0.297			-1730
	Summary Data			2400	3400	6.69			620

NR	GLACIER NAME	YEAR	SYS	ALTITUDE FROM	ALTITUDE TO	AREA KM²	BW MM	BS MM	BN/BA MM
25.8	GRIES (AEGINA)	1969	FXD	3300	3400	0.009			1780
	CH00003			3200	3300	0.133			1740
				3100	3200	0.533			1690
				3000	3100	1.574			1190
				2900	3000	1.015			1020
				2800	2900	0.752			1160
				2700	2800	0.605			620
				2600	2700	1.082			-710
				2500	2600	0.563			-1600
				2400	2500	0.297			-2250
	Summary Data			2400	3400	6.69			490
25.9	GRIES (AEGINA)	1970	FXD	3300	3400	0.009			330
	CH00003			3200	3300	0.133			250
				3100	3200	0.533			270
				3000	3100	1.574			230
				2900	3000	1.015			-70
				2800	2900	0.752			-200
				2700	2800	0.605			-250
				2600	2700	1.082			-1240
				2500	2600	0.563			-2210
				2400	2500	0.297			-3270
	Summary Data			2400	3400	6.69			-500
25.10	GRIES (AEGINA)	1971	FXD	3300	3400	0.009			2220
	CH00003			3200	3300	0.133			1350
				3100	3200	0.533			60
				3000	3100	1.574			-280
				2900	3000	1.015			-540
				2800	2900	0.752			-820
				2700	2800	0.605			-1220
				2600	2700	1.082			-2150
				2500	2600	0.563			-2530
				2400	2500	0.297			-2820
	Summary Data			2400	3400	6.69			-1040
25.11	GRIES (AEGINA)	1972	FXD	3300	3400	0.009			1330
	CH00003			3200	3300	0.133			1260
				3100	3200	0.533			1160
				3000	3100	1.574			1060
				2900	3000	1.015			740
				2800	2900	0.752			580
				2700	2800	0.605			190
				2600	2700	1.082			-290
				2500	2600	0.563			-470
				2400	2500	0.297			-980
	Summary Data			2400	3400	6.69			460
25.12	GRIES (AEGINA)	1973	FXD	3300	3400	0.009			330
	CH00003			3200	3300	0.133			250
				3100	3200	0.533			30
				3000	3100	1.574			-180
				2900	3000	1.015			-390
				2800	2900	0.752			-760
				2700	2800	0.605			-1300
				2600	2700	1.082			-2290

NR	GLACIER NAME	YEAR	SYS	ALTITUDE FROM	TO	AREA KM²	BW MM	BS MM	BN/BA MM
				2500	2600	0.563			-2850
				2400	2500	0.297			-3540
	Summary Data			2400	3400	6.69			-1060
25.13	GRIES (AEGINA)	1974	FXD	3300	3400	0.009			1200
	CH00003			3200	3300	0.133			1100
				3100	3200	0.533			880
				3000	3100	1.574			680
				2900	3000	1.015			440
				2800	2900	0.752			100
				2700	2800	0.605			-470
				2600	2700	1.082			-1320
				2500	2600	0.563			-1690
				2400	2500	0.297			-2970
	Summary Data			2400	3400	6.69			-150
25.14	GRIES (AEGINA)	1975	FXD	3300	3400	0.009			1200
	CH00003			3200	3300	0.133			1120
				3100	3200	0.533			1100
				3000	3100	1.574			940
				2900	3000	1.015			670
				2800	2900	0.752			470
				2700	2800	0.605			70
				2600	2700	1.082			-540
				2500	2600	0.563			-1000
				2400	2500	0.297			-1630
	Summary Data			2400	3400	6.69			290
25.15	GRIES (AEGINA)	1976	FXD	3300	3400	0.009			300
	CH00003			3200	3300	0.133			250
				3100	3200	0.533			130
				3000	3100	1.574			-140
				2900	3000	1.015			-460
				2800	2900	0.752			-740
				2700	2800	0.605			-1380
				2600	2700	1.082			-1990
				2500	2600	0.563			-2870
				2400	2500	0.297			-4470
	Summary Data			2400	3400	6.69			-1020
25.16	GRIES (AEGINA)	1977	FXD	3300	3400	0.009			2800
	CH00003			3200	3300	0.133			2750
				3100	3200	0.533			2410
				3000	3100	1.574			2060
				2900	3000	1.015			1620
				2800	2900	0.752			1250
				2700	2800	0.605			700
				2600	2700	1.082			250
				2500	2600	0.563			220
				2400	2500	0.297			-900
	Summary Data			2400	3400	6.69			1280
25.17	GRIES (AEGINA)	1978	FXD	3300	3400	0.009			2300
	CH00003			3200	3300	0.133			2250
				3100	3200	0.533			2250
				3000	3100	1.574			1800

NR	GLACIER NAME	YEAR	SYS	ALTITUDE FROM	ALTITUDE TO	AREA KM²	BW MM	BS MM	BN/BA MM
				2900	3000	1.015			1370
				2800	2900	0.752			1020
				2700	2800	0.605			420
				2600	2700	1.082			-120
				2500	2600	0.563			-430
				2400	2500	0.297			-1400
	Summary Data			2400	3400	6.69			970
25.18	GRIES (AEGINA)	1979	FXD	3300	3400	0.01			300
	CH00003			3200	3300	0.13			250
				3100	3200	0.547			120
				3000	3100	1.597			-30
				2900	3000	1.004			-650
				2800	2900	0.726			-840
				2700	2800	0.543			-1120
				2600	2700	0.984			-1820
				2500	2600	0.608			-2230
				2400	2500	0.184			-2710
	Summary Data			2400	3400	6.337			-860
25.19	GRIES (AEGINA)	1980	FXD	3300	3400	0.01			1800
	CH00003			3200	3300	0.13			1740
				3100	3200	0.547			1550
				3000	3100	1.597			1490
				2900	3000	1.004			1020
				2800	2900	0.726			580
				2700	2800	0.543			370
				2600	2700	0.984			-70
				2500	2600	0.608			-870
				2400	2500	0.184			-1690
	Summary Data			2400	3400	6.337			720
25.20	GRIES (AEGINA)	1981	FXD	3300	3400	0.01			1300
	CH00003			3200	3300	0.13			1250
				3100	3200	0.547			770
				3000	3100	1.597			610
				2900	3000	1.004			60
				2800	2900	0.726			-290
				2700	2800	0.543			-330
				2600	2700	0.984			-960
				2500	2600	0.608			-1640
				2400	2500	0.184			-4440
	Summary Data			2400	3400	6.337			-230
25.21	GRIES (AEGINA)	1982	FXD	3300	3400	0.01			300
	CH00003			3200	3300	0.13			250
				3100	3200	0.547			280
				3000	3100	1.597			100
				2900	3000	1.004			-370
				2800	2900	0.726			-590
				2700	2800	0.543			-1090
				2600	2700	0.984			-1970
				2500	2600	0.608			-2770
				2400	2500	0.184			-5290
	Summary Data			2400	3400	6.337			-880

NR	GLACIER NAME	YEAR	SYS	ALTITUDE FROM	ALTITUDE TO	AREA KM²	BW MM	BS MM	BN/BA MM
25.22	GRIES (AEGINA)	1983	FXD	3300	3400	0.01			800
	CH00003			3200	3300	0.13			750
				3100	3200	0.547			640
				3000	3100	1.597			350
				2900	3000	1.004			-360
				2800	2900	0.726			-680
				2700	2800	0.543			-940
				2600	2700	0.984			-1500
				2500	2600	0.608			-1800
				2400	2500	0.184			-3290
	Summary Data			2400	3400	6.337			-550
25.23	GRIES (AEGINA)	1984	FXD	3300	3400	0.01			1200
	CH00003			3200	3300	0.13			1250
				3100	3200	0.547			1000
				3000	3100	1.597			780
				2900	3000	1.004			150
				2800	2900	0.726			-20
				2700	2800	0.543			-350
				2600	2700	0.984			-820
				2500	2600	0.608			-1260
				2400	2500	0.184			-2110
	Summary Data			2400	3400	6.337			0
25.24	GRIES (AEGINA)	1985	FXD	3300	3400	0.01			910
	CH00003			3200	3300	0.13			810
				3100	3200	0.547			700
				3000	3100	1.597			530
				2900	3000	1.004			260
				2800	2900	0.726			-120
				2700	2800	0.543			-600
				2600	2700	0.984			-1200
				2500	2600	0.608			-1900
				2400	2500	0.184			-2700
	Summary Data			2400	3400	6.337			-260
25.25	GRIES (AEGINA)	1986	FXD	3300	3400	0.01			670
	CH00003			3200	3300	0.09			560
				3100	3200	0.43			440
				3000	3100	1.666			280
				2900	3000	1.061			10
				2800	2900	0.727			-370
				2700	2800	0.573			-870
				2600	2700	0.85			-1490
				2500	2600	0.678			-2220
				2400	2500	0.164			-3060
	Summary Data			2400	3400	6.249			-530
25.26	GRIES (AEGINA)	1987	FXD	3300	3400	0.01			550
	CH00003			3200	3300	0.09			430
				3100	3200	0.43			310
				3000	3100	1.666			160
				2900	3000	1.061			-110
				2800	2900	0.727			-490
				2700	2800	0.573			-1000
				2600	2700	0.85			-1620

NR	GLACIER NAME	YEAR	SYS	ALTITUDE FROM	TO	AREA KM²	BW MM	BS MM	BN/BA MM
				2500	2600	0.678			-2370
				2400	2500	0.164			-3230
	Summary Data			2400	3400	6.249			-660
25.27	GRIES (AEGINA)	1988	FXD	3300	3400	0.01			360
	CH00003			3200	3300	0.09			240
				3100	3200	0.43			110
				3000	3100	1.666			-50
				2900	3000	1.061			-310
				2800	2900	0.727			-700
				2700	2800	0.573			-1220
				2600	2700	0.85			-1860
				2500	2600	0.678			-2630
				2400	2500	0.164			-3520
	Summary Data			2400	3400	6.249			-880
25.28	GRIES (AEGINA)	1989	FXD	3300	3400	0.01			200
	CH00003			3200	3300	0.09			70
				3100	3200	0.43			-70
				3000	3100	1.666			-220
				2900	3000	1.061			-480
				2800	2900	0.727			-880
				2700	2800	0.573			-1400
				2600	2700	0.85			-2060
				2500	2600	0.678			-2850
				2400	2500	0.164			-3770
	Summary Data			2400	3400	6.249			-1060
25.29	GRIES (AEGINA)	1990	FXD	3300	3400	0.01			-390
	CH00003			3200	3300	0.09			-540
				3100	3200	0.43			-700
				3000	3100	1.666			-860
				2900	3000	1.061			-1120
				2800	2900	0.727			-1520
				2700	2800	0.573			-2080
				2600	2700	0.85			-2790
				2500	2600	0.678			-3660
				2400	2500	0.164			-4670
	Summary Data			2400	3400	6.249			-1740
25.30	GRIES (AEGINA)	1991	FXD	3300	3400	0.01			120
	CH00003			3200	3300	0.206			-20
				3100	3200	0.692			-150
				3000	3100	1.6			-310
				2900	300	0.994			-570
				2800	2900	0.658			-960
				2700	2800	0.457			-1490
				2600	2700	0.619			-2160
				2500	2600	0.805			-2960
				2400	2500	0.153			-3890
	Summary Data			2400	3400	6.194			-1100
25.31	GRIES (AEGINA)	1992	FXD	3300	3400	0.01			450
	CH00003			3200	3300	0.206			320
				3100	3200	0.692			200
				3000	3100	1.6			40

NR	GLACIER NAME	YEAR	SYS	ALTITUDE FROM	TO	AREA KM²	BW MM	BS MM	BN/BA MM
				2900	3000	0.994			-220
				2800	2900	0.658			-610
				2700	2800	0.457			-1120
				2600	2700	0.619			-1750
				2500	2600	0.805			-2510
				2400	2500	0.153			-3390
	Summary Data			2400	3400	6.194			-720
25.32	GRIES (AEGINA)	1993	FXD	3300	3400	0.01			1080
	CH00003			3200	3300	0.206			970
				3100	3200	0.692			860
				3000	3100	1.6			690
				2900	3000	0.994			420
				2800	2900	0.658			50
				2700	2800	0.457			-430
				2600	2700	0.619			-1010
				2500	2600	0.805			-1690
				2400	2500	0.153			-2470
	Summary Data			2400	3400	6.194			-30
25.33	GRIES (AEGINA)	1994	FXD	3300	3400	0.01			650
	CH00003			3200	3300	0.206			530
				3100	3200	0.692			420
				3000	3100	1.6			260
				2900	3000	0.994			-10
				2800	2900	0.658			-390
				2700	2800	0.457			-890
				2600	2700	0.619			-1510
				2500	2600	0.805			-2240
				2400	2500	0.153			-3090
	Summary Data			2400	3400	6.194			-500
25.34	GRIES (AEGINA)	1995	FXD	3300	3400	0.01			1250
	CH00003			3200	3300	0.206			1150
				3100	3200	0.692			1050
				3000	3100	1.6			870
				2900	3000	0.994			600
				2800	2900	0.658			230
				2700	2800	0.457			-240
				2600	2700	0.619			-810
				2500	2600	0.805			-1470
				2400	2500	0.153			-2220
	Summary Data			2400	3400	6.194			160
26.1	SILVRETTA	1960	FXD	3000	3150	0.242			1970
	CH00090			2900	3000	0.577			1180
				2800	2900	0.628			740
				2700	2800	0.789			340
				2600	2700	0.498			130
				2500	2600	0.385			-430
				2400	2500	0.031			-2420
	Summary Data			2400	3150	3.15			480
26.2	SILVRETTA	1961	FXD	3000	3150	0.242			1380
	CH00090			2900	3000	0.577			1200
				2800	2900	0.628			940

NR	GLACIER NAME	YEAR	SYS	ALTITUDE FROM	ALTITUDE TO	AREA KM²	BW MM	BS MM	BN/BA MM
				2700	2800	0.789			500
				2600	2700	0.498			-490
				2500	2600	0.385			-1210
				2400	2500	0.031			-2680
	Summary Data			2400	3150	3.15			330
26.3	SILVRETTA	1962	FXD	3000	3150	0.242			300
	CH00090			2900	3000	0.577			200
				2800	2900	0.628			-30
				2700	2800	0.789			-650
				2600	2700	0.498			-1050
				2500	2600	0.385			-1430
				2400	2500	0.031			-3900
	Summary Data			2400	3150	3.15			-560
26.4	SILVRETTA	1963	FXD	3000	3150	0.242			250
	CH00090			2900	3000	0.577			-100
				2800	2900	0.628			-440
				2700	2800	0.789			-980
				2600	2700	0.498			-1590
				2500	2600	0.385			-2370
				2400	2500	0.031			-4650
	Summary Data			2400	3150	3.15			-990
26.5	SILVRETTA	1964	FXD	3000	3150	0.242			130
	CH00090			2900	3000	0.577			-480
				2800	2900	0.628			-830
				2700	2800	0.789			-1660
				2600	2700	0.498			-1940
				2500	2600	0.385			-2360
				2400	2500	0.031			-5840
	Summary Data			2400	3150	3.15			-1410
26.6	SILVRETTA	1965	FXD	3000	3150	0.242			2530
	CH00090			2900	3000	0.577			1700
				2800	2900	0.628			1560
				2700	2800	0.789			1320
				2600	2700	0.498			1050
				2500	2600	0.385			690
				2400	2500	0.031			-1040
	Summary Data			2400	3150	3.15			1340
26.7	SILVRETTA	1966	FXD	3000	3150	0.242			2470
	CH00090			2900	3000	0.577			1770
				2800	2900	0.628			1550
				2700	2800	0.789			1210
				2600	2700	0.498			880
				2500	2600	0.385			340
				2400	2500	0.031			-2310
	Summary Data			2400	3150	3.15			1210
26.8	SILVRETTA	1967	FXD	3000	3150	0.242			1610
	CH00090			2900	3000	0.577			1000
				2800	2900	0.628			780
				2700	2800	0.789			370
				2600	2700	0.498			-240

NR	GLACIER NAME	YEAR	SYS	ALTITUDE		AREA	BW	BS	BN/BA
				FROM	TO	KM²	MM	MM	MM
				2500	2600	0.385			-650
				2400	2500	0.031			-2660
	Summary Data			2400	3150	3.15			350
26.9	SILVRETTA	1968	FXD	3000	3150	0.242			1870
	CH00090			2900	3000	0.577			1310
				2800	2900	0.628			1200
				2700	2800	0.789			550
				2600	2700	0.498			200
				2500	2600	0.385			-510
				2400	2500	0.031			-2680
	Summary Data			2400	3150	3.15			640
26.10	SILVRETTA	1969	FXD	3000	3150	0.242			870
	CH00090			2900	3000	0.577			530
				2800	2900	0.628			300
				2700	2800	0.789			-280
				2600	2700	0.498			-750
				2500	2600	0.385			-1430
				2400	2500	0.031			-4180
	Summary Data			2400	3150	3.15			-260
26.11	SILVRETTA	1970	FXD	3000	3150	0.242			1400
	CH00090			2900	3000	0.577			880
				2800	2900	0.628			610
				2700	2800	0.789			150
				2600	2700	0.498			-380
				2500	2600	0.385			-1270
				2400	2500	0.031			-2680
	Summary Data			2400	3150	3.15			130
26.12	SILVRETTA	1971	FXD	3000	3150	0.242			630
	CH00090			2900	3000	0.577			130
				2800	2900	0.628			-320
				2700	2800	0.789			-860
				2600	2700	0.498			-1570
				2500	2600	0.385			-2670
				2400	2500	0.031			-5210
	Summary Data			2400	3150	3.15			-920
26.13	SILVRETTA	1972	FXD	3000	3150	0.242			850
	CH00090			2900	3000	0.577			530
				2800	2900	0.628			130
				2700	2800	0.789			-330
				2600	2700	0.498			-710
				2500	2600	0.385			-1290
				2400	2500	0.031			-3500
	Summary Data			2400	3150	3.15			-270
26.14	SILVRETTA	1973	FXD	3000	3150	0.242			-330
	CH00090			2900	3000	0.577			-460
				2800	2900	0.628			-690
				2700	2800	0.789			-1410
				2600	2700	0.498			-1820
				2500	2600	0.385			-2340

NR	GLACIER NAME	YEAR	SYS	ALTITUDE FROM	TO	AREA KM²	BW MM	BS MM	BN/BA MM
				2400	2500	0.031			-3810
	Summary Data			2400	3150	3.15			-1210
26.15	SILVRETTA	1974	FXD	3000	3150	0.242			1560
	CH00090			2900	3000	0.577			1370
				2800	2900	0.628			1190
				2700	2800	0.789			580
				2600	2700	0.498			310
				2500	2600	0.385			-280
				2400	2500	0.031			-2360
	Summary Data			2400	3150	3.15			740
26.16	SILVRETTA	1975	FXD	3000	3150	0.242			1740
	CH0090			2900	3000	0.577			1390
				2800	2900	0.628			1230
				2700	2800	0.789			670
				2600	2700	0.498			310
				2500	2600	0.385			-250
				2400	2500	0.031			-2840
	Summary Data			2400	3150	3.15			790
26.17	SILVRETTA	1976	FXD	3000	3150	0.242			380
	CH0090			2900	3000	0.577			250
				2800	2900	0.628			-60
				2700	2800	0.789			-410
				2600	2700	0.498			-1090
				2500	2600	0.385			-2020
				2400	2500	0.031			-5070
	Summary Data			2400	3150	3.15			-510
26.18	SILVRETTA	1977	FXD	3000	3150	0.242			1880
	CH0090			2900	3000	0.577			1410
				2800	2900	0.628			1150
				2700	2800	0.789			610
				2600	2700	0.498			-100
				2500	2600	0.385			-990
				2400	2500	0.031			-2810
	Summary Data			2400	3150	3.15			620
26.19	SILVRETTA	1978	FXD	3000	3150	0.242			1760
	CH0090			2900	3000	0.577			1550
				2800	2900	0.628			1350
				2700	2800	0.789			760
				2600	2700	0.498			470
				2500	2600	0.385			-50
				2400	2500	0.031			-2100
	Summary Data			2400	3150	3.15			940
26.20	SILVRETTA	1979	FXD	3000	3150	0.242			860
	CH0090			2900	3000	0.577			400
				2800	2900	0.628			350
				2700	2800	0.789			-160
				2600	2700	0.498			-570
				2500	2600	0.385			-950
				2400	2500	0.031			-2230
	Summary Data			2400	3150	3.15			-60

NR	GLACIER NAME	YEAR	SYS	ALTITUDE		AREA	BW	BS	BN/BA
				FROM	TO	KM²	MM	MM	MM
26.21	SILVRETTA	1980	FXD	3000	3150	0.242			1910
	CH0090			2900	3000	0.577			1550
				2800	2900	0.628			1460
				2700	2800	0.789			1090
				2600	2700	0.498			610
				2500	2600	0.385			-340
				2400	2500	0.031			-1970
	Summary Data			2400	3150	3.15			1110
26.22	SILVRETTA	1981	FXD	3000	3150	0.242			890
	CH0090			2900	3000	0.577			860
				2800	2900	0.628			740
				2700	2800	0.789			410
				2600	2700	0.498			-160
				2500	2600	0.385			-680
				2400	2500	0.031			-2230
	Summary Data			2400	3150	3.15			350
26.23	SILVRETTA	1982	FXD	3000	3150	0.242			270
	CH0090			2900	3000	0.577			300
				2800	2900	0.628			160
				2700	2800	0.789			-100
				2600	2700	0.498			-770
				2500	2600	0.385			-1180
				2400	2500	0.031			-2770
	Summary Data			2400	3150	3.15			-210
26.24	SILVRETTA	1983	FXD	3000	3150	0.242			250
	CH0090			2900	3000	0.577			100
				2800	2900	0.628			-110
				2700	2800	0.789			-470
				2600	2700	0.498			-990
				2500	2600	0.385			-2020
				2400	2500	0.031			-4260
	Summary Data			2400	3150	3.15			-550
26.25	SILVRETTA	1984	FXD	3000	3150	0.242			750
	CH0090			2900	3000	0.577			810
				2800	2900	0.628			740
				2700	2800	0.789			310
				2600	2700	0.498			-200
				2500	2600	0.385			-810
				2400	2500	0.031			-2100
	Summary Data			2400	3150	3.15			280
26.26	SILVRETTA	1985	FXD	3000	3100	0.242			1080
	CH0090			2900	3000	0.577			1060
				2800	2900	0.628			920
				2700	2800	0.789			580
				2600	2700	0.498			20
				2500	2600	0.385			-630
				2400	2500	0.031			-2300
	Summary Data			2400	3100	3.15			510
26.27	SILVRETTA	1987	FXD	3000	3150	0.242			620
	CH0090			2900	3000	0.577			370

NR	GLACIER NAME	YEAR	SYS	ALTITUDE FROM	ALTITUDE TO	AREA KM²	BW MM	BS MM	BN/BA MM
				2800	2900	0.628			100
				2700	2800	0.789			-320
				2600	2700	0.498			-1000
				2500	2600	0.385			-1930
				2400	2500	0.031			-3120
	Summary Data			2400	3150	3.15			-370
26.28	SILVRETTA	1988	FXD	3000	3150	0.242			420
	CH0090			2900	3000	0.577			160
				2800	2900	0.628			-120
				2700	2800	0.789			-560
				2600	2700	0.498			-1250
				2500	2600	0.385			-2210
				2400	2500	0.031			-3440
	Summary Data			2400	3150	3.15			-600
26.29	SILVRETTA	1989	FXD	3000	3150	0.242			730
	CH0090			2900	3000	0.577			480
				2800	2900	0.628			210
				2700	2800	0.789			-210
				2600	2700	0.498			-870
				2500	2600	0.385			-1780
				2400	2500	0.031			-2950
	Summary Data			2400	3150	3.15			-250
26.30	SILVRETTA	1990	FXD	3000	3150	0.242			450
	CH0090			2900	3000	0.577			180
				2800	2900	0.628			-90
				2700	2800	0.789			-530
				2600	2700	0.498			-1220
				2500	2600	0.385			-2180
				2400	2500	0.031			-3390
	Summary Data			2400	3150	3.15			-570
26.31	SILVRETTA	1991	FXD	3000	3100	0.242			-70
	CH0090			2900	3000	0.577			-350
				2800	2900	0.628			-650
				2700	2800	0.789			-1130
				2600	2700	0.498			-1880
				2500	2600	0.385			-2920
				2400	2500	0.031			-4220
	Summary Data			2400	3100	3.15			-1180
26.32	SILVRETTA	1992	FXD	3000	3100	0.242			230
	CH0090			2900	3000	0.577			-40
				2800	2900	0.628			-320
				2700	2800	0.789			-780
				2600	2700	0.498			-1500
				2500	2600	0.385			-2480
				2400	2500	0.031			-3740
	Summary Data			2400	3100	3.15			-830
26.33	SILVRETTA	1993	FXD	3000	3100	0.242			740
	CH0090			2900	300	0.577			490
				2800	2900	0.628			230
				2700	2800	0.789			-180

NR	GLACIER NAME	YEAR	SYS	ALTITUDE FROM	ALTITUDE TO	AREA KM²	BW MM	BS MM	BN/BA MM
				2600	2700	0.498			-840
				2500	2600	0.385			-1760
				2400	2500	0.031			-2920
	Summary Data			2400	3100	3.15			-230
26.34	SILVRETTA	1994	FXD	3000	3100	0.242			370
	CH0090			2900	3000	0.577			100
				2800	2900	0.628			-180
				2700	2800	0.789			-620
				2600	2700	0.498			-1320
				2500	2600	0.385			-2290
				2400	2500	0.031			-3520
	Summary Data			2400	3100	3.15			-670
26.35	SILVRETTA	1995	FXD	3000	3100	0.242			1120
	CH0090			2900	3000	0.577			880
				2800	2900	0.628			630
				2700	2800	0.789			250
				2600	2700	0.498			-370
				2500	2600	0.385			-1230
				2400	2500	0.031			-2330
	Summary Data			2400	3100	3.15			200
	AUSTRIA								
27.1	HINTEREIS F.	1991	FXD	3700	3750	0.004			0
	A 0209			3650	3700	0.023			0
				3600	3650	0.032			27
				3550	3600	0.023			5
				3500	3550	0.022			-165
				3450	3500	0.086			-90
				3400	3450	0.165			-96
				3350	3400	0.294			34
				3300	3350	0.422			224
				3250	3300	0.469			28
				3200	3250	0.512			-75
				3150	3200	0.702			-200
				3100	3150	0.865			-362
				3050	3100	0.804			-630
				3000	3050	0.616			-840
				2950	3000	0.606			-1129
				2900	2950	0.606			-1487
				2850	2900	0.504			-1836
				2800	2850	0.396			-2593
				2750	2800	0.614			-3186
				2700	2750	0.348			-3759
				2650	2700	0.375			-4161
				2600	2650	0.198			-4518
				2550	2600	0.102			-5108
				2500	2550	0.065			-5627
				2450	2500	0.031			-6540
	Summary Data			2450	3750	8.884			-1325
27.2	HINTEREIS F.	1992	FXD	3700	3750	0.004			0
	A 0209			3650	3700	0.023			0
				3600	3650	0.032			0
				3550	3600	0.023			-98

NR	GLACIER NAME	YEAR	SYS	ALTITUDE FROM	TO	AREA KM²	BW MM	BS MM	BN/BA MM
				3500	3550	0.022			-63
				3450	3500	0.086			-114
				3400	3450	0.165			-53
				3350	3400	0.294			25
				3300	3350	0.422			238
				3250	3300	0.469			214
				3200	3250	0.512			75
				3150	3200	0.702			77
				3100	3150	0.865			-99
				3050	3100	0.804			-411
				3000	3050	0.616			-923
				2950	3000	0.606			-1199
				2900	2950	0.606			-1381
				2850	2900	0.503			-1725
				2800	2850	0.396			-2076
				2750	2800	0.614			-2369
				2700	2750	0.348			-3440
				2650	2700	0.375			-3681
				2600	2650	0.195			-4371
				2550	2600	0.102			-5167
				2500	2550	0.065			-5912
				2450	2500	0.029			-6526
	Summary Data			2450	3750	8.878			-1120
27.3	HINTEREIS F.	1993	FXD	3700	3750	0.004			-63
	A 0209			3650	3700	0.023			-22
				3600	3650	0.032			113
				3550	3600	0.023			60
				3500	3550	0.022			-28
				3450	3500	0.086			215
				3400	3450	0.165			278
				3350	3400	0.294			509
				3300	3350	0.422			770
				3250	3300	0.469			599
				3200	3250	0.512			400
				3150	3200	0.702			444
				3100	3150	0.865			380
				3050	3100	0.804			152
				3000	3050	0.616			-148
				2950	3000	0.606			-392
				2900	2950	0.606			-787
				2850	2900	0.502			-1211
				2800	2850	0.396			-1543
				2750	2800	0.603			-1997
				2700	2750	0.317			-2886
				2650	2700	0.344			-3429
				2600	2650	0.193			-3903
				2550	2600	0.099			-4638
				2500	2550	0.044			-5466
				2450	2500	0.006			-6167
	Summary Data			2450	3750	8.754			-573
27.4	HINTEREIS F.	1994	FXD	3700	3750	0.004			63
	A 0209			3650	3700	0.023			49
				3600	3650	0.032			47
				3550	3600	0.023			65

NR	GLACIER NAME	YEAR	SYS	ALTITUDE FROM	TO	AREA KM²	BW MM	BS MM	BN/BA MM
				3500	3550	0.022			-57
				3450	3500	0.086			3
				3400	3450	0.165			42
				3350	3400	0.294			210
				3300	3350	0.42			346
				3250	3300	0.468			169
				3200	3250	0.512			118
				3150	3200	0.702			109
				3100	3150	0.861			-144
				3050	3100	0.801			-301
				3000	3050	0.616			-575
				2950	3000	0.606			-991
				2900	2950	0.606			-1300
				2850	2900	0.502			-1562
				2800	2850	0.396			-2456
				2750	2800	0.603			-2672
				2700	2750	0.317			-3842
				2650	2700	0.344			-4601
				2600	2650	0.193			-4942
				2550	2600	0.097			-5657
				2500	2550	0.042			-6381
				2450	2500	0.002			-6750
	Summary Data			2450	3750	8.737			-1107
27.5	HINTEREIS F.	1995	FXD	3700	3750	0.004			375
	A 0209			3650	3700	0.023			223
				3600	3650	0.032			227
				3550	3600	0.023			299
				3500	3550	0.022			307
				3450	3500	0.086			323
				3400	3450	0.165			351
				3350	3400	0.294			491
				3300	3350	0.42			731
				3250	3300	0.468			555
				3200	3250	0.512			407
				3150	3200	0.702			464
				3100	3150	0.861			302
				3050	3100	0.801			-35
				3000	3050	0.616			-254
				2950	3000	0.606			-455
				2900	2950	0.606			-618
				2850	2900	0.502			-812
				2800	2850	0.396			-1301
				2750	2800	0.603			-1597
				2700	2750	0.317			-2409
				2650	2700	0.344			-2836
				2600	2650	0.183			-3190
				2550	2600	0.097			-4013
				2500	2550	0.042			-4869
	Summary Data			2500	3750	8.725			-461
28.1	JAMTAL F.	1991	FXD	3100	3200	0.014	700	-950	-250
	A 0106			3000	3100	0.298	800	-1160	-360
				2900	3000	0.845	900	-1520	-620
				2800	2900	0.79	750	-1750	-1000
				2700	2800	0.772	760	-2350	-1590

NR	GLACIER NAME	YEAR	SYS	ALTITUDE FROM	TO	AREA KM²	BW MM	BS MM	BN/BA MM
				2600	2700	0.634	730	-2890	-2160
				2500	2600	0.379	750	-3650	-2900
				2400	2500	0.114	690	-4310	-3620
	Summary Data			2400	3200	3.846	780	-2220	-1440
28.2	JAMTAL F.	1992	FXD	3100	3200	0.014	1100	-1850	-750
	A 0106			3000	3100	0.298	1180	-1550	-370
				2900	3000	0.845	1360	-1860	-500
				2800	2900	0.79	1550	-2640	-1090
				2700	2800	0.772	1580	-2970	-1390
				2600	2700	0.634	1440	-3020	-1580
				2500	2600	0.379	1450	-3750	-2300
				2400	2500	0.114	1450	-4850	-3400
	Summary Data			2400	3200	3.846	1450	-2680	-1230
28.3	JAMTAL F.	1993	FXD	3100	3200	0.014	1100	-940	160
	A 0106			3000	3100	0.298	1100	-660	440
				2900	3000	0.845	1270	-780	490
				2800	2900	0.79	1360	-1420	-60
				2700	2800	0.772	1310	-1700	-390
				2600	2700	0.634	1280	-2290	-1010
				2500	2600	0.379	1300	-3070	-1770
				2400	2500	0.114	1120	-3820	-2700
	Summary Data			2400	3200	3.846	1280	-1650	-370
28.4	JAMTAL F.	1994	FXD	3100	3200	0.014	1200	-1260	-60
	A 0106			3000	3100	0.298	1200	-1210	-10
				2900	3000	0.845	1210	-1340	-130
				2800	2900	0.79	1340	-1780	-440
				2700	2800	0.772	1310	-2080	-770
				2600	2700	0.634	1370	-2670	-1300
				2500	2600	0.379	1330	-3840	-2510
				2400	2500	0.114	1300	-4390	-3090
	Summary Data			2400	3200	3.846	1300	-2120	-830
28.5	JAMTAL F.	1995	FXD	3100	3200	0.014	1320	-1270	50
	A 0106			3000	3100	0.298	1320	-900	420
				2900	3000	0.845	1470	-1080	390
				2800	2900	0.788	1360	-1300	60
				2700	2800	0.769	1490	-1600	-110
				2600	2700	0.627	1470	-2020	-550
				2500	2600	0.367	1410	-2630	-1220
				2400	2500	0.09	1240	-3150	-1910
	Summary Data			2400	3200	3.798	1430	-1590	-146
29.1	KESSELWAND F.	1991	FXD	3450	3500	0.025			-390
	A 0226			3400	3450	0.031			-700
				3350	3400	0.066			-250
				3300	3350	0.287			-50
				3250	3300	0.647			-20
				3200	3250	0.864			-200
				3150	3200	0.745			-400
				3100	3150	0.551			-680
				3050	3100	0.401			-1290
				3000	3050	0.197			-1880
				2950	3000	0.152			-2340

NR	GLACIER NAME	YEAR	SYS	ALTITUDE FROM	TO	AREA KM²	BW MM	BS MM	BN/BA MM
				2900	2950	0.117			-2400
				2850	2900	0.099			-2700
				2800	2850	0.104			-3340
				2750	2800	0.068			-4280
				2700	2750	0.047			-4920
				2650	2700	0.031			-5620
	Summary Data			2650	3500	4.432			-849
29.2	KESSELWAND F.	1992	FXD	3450	3500	0.025			-250
	A 0226			3400	3450	0.031			90
				3350	3400	0.066			-197
				3300	3350	0.287			85
				3250	3300	0.647			308
				3200	3250	0.864			252
				3150	3200	0.745			127
				3100	3150	0.551			-254
				3050	3100	0.401			-685
				3000	3050	0.197			-1326
				2950	3000	0.152			-1770
				2900	2950	0.117			-1989
				2850	2900	0.099			-2215
				2800	2850	0.104			-2716
				2750	2800	0.068			-4279
				2700	2750	0.047			-4612
				2650	2700	0.029			-5717
	Summary Data			2650	3500	4.43			-414
29.3	KESSELWAND F.	1993	FXD	3450	3500	0.025			100
	A 0226			3400	3450	0.031			-110
				3350	3400	0.066			100
				3300	3350	0.287			550
				3250	3300	0.647			620
				3200	3250	0.864			530
				3150	3200	0.745			390
				3100	3150	0.551			130
				3050	3100	0.401			-330
				3000	3050	0.197			-720
				2950	3000	0.152			-1030
				2900	2950	0.117			-1360
				2850	2900	0.095			-2030
				2800	2850	0.103			-3060
				2750	2800	0.061			-4330
				2700	2750	0.038			-5170
				2650	2700	0.026			-5810
	Summary Data			2650	3500	4.406			-75
29.4	KESSELWAND F.	1994	FXD	3450	3500	0.025			-250
	A 0226			3400	3450	0.031			-250
				3350	3400	0.066			-300
				3300	3350	0.287			40
				3250	3300	0.647			140
				3200	3250	0.864			-80
				3150	3200	0.745			-300
				3100	3150	0.551			-690
				3050	3100	0.401			-1260
				3000	3050	0.197			-1740

NR	GLACIER NAME	YEAR	SYS	ALTITUDE FROM	TO	AREA KM²	BW MM	BS MM	BN/BA MM
				2950	3000	0.152			-2900
				2900	2950	0.117			-2840
				2850	2900	0.099			-3830
				2800	2850	0.104			-4690
				2750	2800	0.05			-5820
				2700	2750	0.037			-6400
	Summary Data			2700	3500	4.373			-828
29.5	KESSELWAND F.	1995	FXD	3450	3500	0.025			100
	A 0226			3400	3450	0.03			187
				3350	3400	0.064			300
				3300	3350	0.286			713
				3250	3300	0.647			737
				3200	3250	0.864			603
				3150	3200	0.745			480
				3100	3150	0.515			344
				3050	3100	0.392			-63
				3000	3050	0.204			-515
				2950	3000	0.16			-1222
				2900	2950	0.098			-1342
				2850	2900	0.099			-1770
				2800	2850	0.074			-2432
				2750	2800	0.066			-3530
				2700	2750	0.022			-4568
	Summary Data			2700	3500	4.291			144
30.1	OCHSENTALERGL.	1991	FXD	3100	3200	0.021			20
	A 0103			3000	3100	0.373			290
				2900	3000	1.02			120
				2800	2900	0.464			-510
				2700	2800	0.217			-1380
				2600	2700	0.262			-2350
				2500	2600	0.208			-3150
				2400	2500	0.053			-3250
				2300	2400	0.025			-3590
	Summary Data			2300	3200	2.643			-705
30.2	OCHSENTALERGL.	1992	FXD	3100	3200	0.021	1350	-1830	-480
	A 0103			3000	3100	0.373	1530	-1660	-130
				2900	3000	1.02	1770	-2150	-380
				2800	2900	0.464	1600	-2770	-1170
				2700	2800	0.217	1360	-3240	-1880
				2600	2700	0.262	1300	-3570	-2270
				2500	2600	0.208	990	-4140	-3150
				2400	2500	0.053	900	-4740	-3840
				2300	2400	0.024	900	-5360	-4460
	Summary Data			2300	3200	2.642	1540	-2660	-1120
30.3	OCHSENTALERGL.	1993	FXD	3100	3200	0.021	1400	-1180	220
	A 0103			3000	3100	0.373	1400	-610	790
				2900	3000	1.02	1530	-1010	520
				2800	2900	0.464	1230	-1300	-70
				2700	2800	0.217	1200	-2160	-960
				2600	2700	0.262	1150	-2780	-1630
				2500	2600	0.208	1100	-3180	-2080
				2400	2500	0.053	1050	-3870	-2820

NR	GLACIER NAME	YEAR	SYS	ALTITUDE FROM	TO	AREA KM²	BW MM	BS MM	BN/BA MM
				2300	2400	0.02	1000	-4750	-3750
	Summary Data			2300	3200	2.638	1340	1530	-190
30.4	OCHSENTALERGL.	1994	FXD	3100	3200	0.021	1480	-1280	200
	A 0103			3000	3100	0.373	1540	-1330	210
				2900	3000	1.02	1700	-1800	-100
				2800	2900	0.464	1490	-2700	-1210
				2700	2800	0.217	1330	-3300	-1970
				2600	2700	0.262	1200	-3560	-2360
				2500	2600	0.208	1000	-4250	-3250
				2400	2500	0.053	920	-5000	-4080
				2300	2400	0.011	890	-5890	-5000
	Summary Data			2300	3200	2.629	1480	-2460	-980
30.5	OCHSENTALERGL.	1995	FXD	3100	3200	0.021	1500	-1330	170
	A 0103			3000	3100	0.373	1460	-850	610
				2900	3000	1.02	1500	-890	610
				2800	2900	0.464	1760	-1750	10
				2700	2800	0.217	1680	-2250	-570
				2600	2700	0.262	1430	-2320	-890
				2500	2600	0.208	1480	-2990	-1510
				2400	2500	0.043	1120	-3160	-2040
				2300	2400	0.006	1120	-3870	-2750
	Summary Data			2300	3200	2.614	1540	-1490	50
31.1	VERMUNTGL.	1991	FXD	3100	3200	0.004	900	-1150	-250
	A 0104			3000	3100	0.063	950	-1340	-390
				2900	3000	0.35	770	-1280	-510
				2800	2900	0.745	790	-2010	-1220
				2700	2800	0.726	930	-2720	-1790
				2600	2700	0.243	1000	-3420	-2420
				2500	2600	0.109	1100	-4220	-3120
	Summary Data			2500	3200	2.24	870	-2360	-1490
31.2	VERMUNTGL.	1992	FXD	3100	3200	0.004	1000	-1750	-750
	A 0104			3000	3100	0.063	1000	-1250	-250
				2900	3000	0.35	1090	-1670	-580
				2800	2900	0.745	1250	-2190	-940
				2700	2800	0.726	1210	-2810	-1600
				2600	2700	0.243	1100	-3370	-2270
				2500	2600	0.109	1230	-4720	-3490
	Summary Data			2500	3200	2.24	1190	-2540	-1350
31.3	VERMUNTGL.	1993	FXD	3100	3200	0.004	950	-830	120
	A 0104			3000	3100	0.063	950	-810	140
				2900	3000	0.35	970	-970	0
				2800	2900	0.745	1110	-1440	-330
				2700	2800	0.726	1180	-1800	-620
				2600	2700	0.243	1100	-2520	-1420
				2500	2600	0.109	1000	-3240	-2240
	Summary Data			2500	3200	2.24	1100	-1670	-570
31.4	VERMUNTGL.	1994	FXD	3100	3200	0.004	1000	-1250	-250
	A 0104			3000	3100	0.063	1000	-1000	0
				2900	3000	0.35	1000	-1690	-690
				2800	2900	0.745	1120	-2210	-1090

NR	GLACIER NAME	YEAR	SYS	ALTITUDE FROM	ALTITUDE TO	AREA KM²	BW MM	BS MM	BN/BA MM
				2700	2800	0.726	1230	-3020	-1790
				2600	2700	0.243	1120	-3610	-2490
				2500	2600	0.109	1020	-3600	-2580
	Summary Data			2500	3200	2.24	1130	-2580	-1450
31.5	VERMUNTGL.	1995	FXD	3100	3200	0.004	1140	-1020	120
	A 0104			3000	3100	0.063	1140	-900	240
				2900	3000	0.35	1140	-900	240
				2800	2900	0.745	1330	-1300	30
				2700	2800	0.726	1380	-1750	-370
				2600	2700	0.243	1310	-2130	-820
				2500	2600	0.109	1130	-2840	-1710
	Summary Data			2500	3200	2.24	1300	-1540	-240
32.1	VERNAGT F.	1991	FXD	3550	3600	0.008			-295
	A 0211			3500	3550	0.018			-251
				3450	3500	0.158			-35
				3400	3450	0.198			-119
				3350	3400	0.247			-217
				3300	3350	0.448			-168
				3250	3300	0.944			-153
				3200	3250	1.014			-368
				3150	3200	1.261			-552
				3100	3150	1.273			-741
				3050	3100	1.161			-1226
				3000	3050	0.967			-1835
				2950	3000	0.651			-2619
				2900	2950	0.401			-3139
				2850	2900	0.225			-3692
				2800	2850	0.089			-4249
				2750	2800	0.025			-4569
	Summary Data			2750	3600	9.09			-1080
32.2	VERNAGT F.	1992	FXD	3550	3600	0.008			-205
	A 0211			3500	3550	0.018			-166
				3450	3500	0.158			184
				3400	3450	0.198			34
				3350	3400	0.247			-118
				3300	3350	0.448			59
				3250	3300	0.944			33
				3200	3250	1.014			-207
				3150	3200	1.261			-382
				3100	3150	1.273			-743
				3050	3100	1.161			-1001
				3000	3050	0.967			-1477
				2950	3000	0.651			-2161
				2900	2950	0.401			-2625
				2850	2900	0.225			-3351
				2800	2850	0.089			-3667
				2750	2800	0.025			-3470
	Summary Data			2750	3600	9.09			-858
32.3	VERNAGT F.	1993	FXD	3550	3600	0.008			-115
	A 0211			3500	3550	0.018			-34
				3450	3500	0.158			224
				3400	3450	0.198			136

NR	GLACIER NAME	YEAR	SYS	ALTITUDE FROM	TO	AREA KM²	BW MM	BS MM	BN/BA MM
				3350	3400	0.247			0
				3300	3350	0.448			118
				3250	3300	0.944			136
				3200	3250	1.014			-4
				3150	3200	1.261			-127
				3100	3150	1.273			-315
				3050	3100	1.161			-690
				3000	3050	0.967			-942
				2950	3000	0.651			-1320
				2900	2950	0.401			-1610
				2850	2900	0.225			-2049
				2800	2850	0.089			-2393
				2750	2800	0.025			-2964
	Summary Data			2750	3600	9.09			-472
32.4	VERNAGT F.	1994	FXD	3550	3600	0.008			13
	A 0211			3500	3550	0.018			-17
				3450	3500	0.158			207
				3400	3450	0.198			73
				3350	3400	0.247			-9
				3300	3350	0.448			50
				3250	3300	0.944			-8
				3200	3250	1.014			-276
				3150	3200	1.261			-501
				3100	3150	1.273			-790
				3050	3100	1.161			-1397
				3000	3050	0.967			-1876
				2950	3000	0.651			-2435
				2900	2950	0.401			-2958
				2850	2900	0.225			-3430
				2800	2850	0.089			-4336
				2750	2800	0.025			-4751
	Summary Data			2750	3600	9.09			-1028
32.5	VERNAGT F.	1995	FXD	3550	3600	0.008			-256
	A 0211			3500	3550	0.018			-120
				3450	3500	0.158			144
				3400	3450	0.198			73
				3350	3400	0.247			64
				3300	3350	0.448			108
				3250	3300	0.944			112
				3200	3250	1.014			-1
				3150	3200	1.261			-72
				3100	3150	1.273			-132
				3050	3100	1.161			-460
				3000	3050	0.967			-827
				2950	3000	0.651			-1347
				2900	2950	0.401			-1667
				2850	2900	0.225			-1957
				2800	2850	0.089			-2112
				2750	2800	0.025			-2202
	Summary Data			2750	3600	9.09			-400
33.1	WURTEN K.	1983		3100	3150	0.01	937	-1458	-523
	A 0804			3050	3100	0.045	1077	-1484	-407
				3000	3050	0.081	1231	-1714	-490

NR	GLACIER NAME	YEAR	SYS	ALTITUDE FROM	TO	AREA KM²	BW MM	BS MM	BN/BA MM
				2950	3000	0.109	1247	-1855	-608
				2900	2950	0.109	1105	-2012	-907
				2850	2900	0.159	1104	-2090	-986
				2800	2850	0.11	1169	-2354	-1185
				2750	2800	0.121	1442	-2296	-855
				2700	2750	0.17	1790	-2194	-404
				2650	2700	0.207	1674	-2442	-766
				2600	2650	0.133	1330	-3348	-2016
				2550	2600	0.069	1207	-4049	-2843
				2500	2550	0.029	1281	-4260	-2973
	Summary Data			2500	3150	1.35	1363	-2392	-1029
33.2	WURTEN K.	1984		3100	3150	0.009	476	-177	299
	A 0804			3050	3100	0.044	439	-89	350
				3000	3050	0.081	675	-188	491
				2950	3000	0.108	861	-326	535
				2900	2950	0.106	801	-590	211
				2850	2900	0.156	828	-646	182
				2800	2850	0.109	930	-878	-51
				2750	2800	0.117	823	-699	124
				2700	2750	0.157	1271	-728	543
				2650	2700	0.206	1185	-1062	122
				2600	2650	0.133	829	-1818	-988
				2550	2600	0.068	640	-2009	-1368
				2500	2550	0.029	774	-2247	-1473
	Summary Data			2500	3150	1.322	913	-883	30
33.3	WURTEN K.	1985		3100	3150	0.009	748	-888	-140
	A 0804			3050	3100	0.044	887	-1033	-146
				3000	3050	0.08	1182	-1415	-233
				2950	3000	0.107	1121	-1841	-721
				2900	2950	0.104	1025	-2510	-1485
				2850	2900	0.152	970	-2251	-1281
				2800	2850	0.108	999	-2277	-1238
				2750	2800	0.114	910	-1667	-752
				2700	2750	0.144	1262	-1730	-468
				2650	2700	0.205	1420	-2338	-918
				2600	2650	0.134	1183	-3323	-2140
				2550	2600	0.068	968	-3341	-2373
				2500	2550	0.028	1216	-3544	-2328
	Summary Data			2500	3150	1.295	1123	-2218	-1095
33.4	WURTEN K.	1986		3100	3150	0.008	946	-2050	-1104
	A 0804			3050	3100	0.041	944	-1922	-978
				3000	3050	0.079	941	-1825	-884
				2950	3000	0.105	926	-1909	-983
				2900	2950	0.101	987	-2271	-1284
				2850	2900	0.143	993	-2484	-1491
				2800	2850	0.105	1028	-2651	-1623
				2750	2800	0.104	1175	-2633	-1458
				2700	2750	0.125	1395	-2344	-949
				2650	2700	0.201	1449	-2991	-1542
				2600	2650	0.135	1294	-4017	-2723
				2550	2600	0.068	1193	-4416	-3223
				2500	2550	0.027	1274	-4700	-3426
	Summary Data			2500	3150	1.24	1167	-2739	-1572

NR	GLACIER NAME	YEAR	SYS	ALTITUDE		AREA	BW	BS	BN/BA
				FROM	TO	KM²	MM	MM	MM
33.5	WURTEN K.	1987		3100	3150	0.006	920	-806	114
	A 0804			3050	3100	0.037	1220	-1489	-269
				3000	3050	0.077	1467	-1952	-485
				2950	3000	0.102	1480	-1863	-383
				2900	2950	0.098	1192	-1805	-613
				2850	2900	0.136	1121	-1836	-715
				2800	2850	0.103	1350	-2503	-1153
				2750	2800	0.093	1455	-2516	-1061
				2700	2750	0.11	1939	-2160	-221
				2650	2700	0.199	1803	-2497	-694
				2600	2650	0.135	1381	-2811	-1490
				2550	2600	0.068	1321	-3469	-2148
				2500	2550	0.027	1797	-4251	-2454
	Summary Data			2500	3150	1.191	1482	-2307	-825
33.6	WURTEN K.	1988		3100	3150	0.006	1300	-1350	-69
	A 0804			3050	3100	0.036	1332	-1661	-314
				3000	3050	0.076	1295	-1734	-433
				2950	3000	0.101	1292	-1653	-357
				2900	2950	0.097	1308	-1780	-487
				2850	2900	0.132	1226	-1930	-698
				2800	2850	0.101	1182	-2236	-1075
				2750	2800	0.084	1346	-2106	-837
				2700	2750	0.103	1674	-1985	-304
				2650	2700	0.197	1522	-2139	-617
				2600	2650	0.136	1205	-2702	-1496
				2550	2600	0.067	1208	-3280	-2105
				2500	2550	0.026	1351	-3515	-2241
	Summary Data			2500	3150	1.162	1259	-2037	-785
33.7	WURTEN K.	1989		3100	3150	0.006	1200	-921	281
	A 0804			3050	3100	0.025	1322	-853	469
				3000	3050	0.076	1388	-899	489
				2950	3000	0.101	1304	-1137	167
				2900	2950	0.096	1112	-1205	-93
				2850	2900	0.129	1048	-1322	-274
				2800	2850	0.099	1004	-1330	-326
				2750	2800	0.08	1193	-1406	-213
				2700	2750	0.099	1604	-1422	182
				2650	2700	0.196	1501	-1338	163
				2600	2650	0.136	1147	-1854	-707
				2550	2600	0.067	920	-2262	-1342
				2500	2550	0.026	1017	-2287	-1270
	Summary Data			2500	3150	1.135	1255	-1398	-143
33.8	WURTEN K.	1990		3100	3150	0.006	1110	-910	200
	A 0804			3050	3100	0.035	1109	-936	173
				3000	3050	0.075	1108	-1217	-109
				2950	3000	0.1	929	-1630	-701
				2900	2950	0.095	884	-1814	-930
				2850	2900	0.125	897	-1844	-947
				2800	2850	0.098	959	-1935	-976
				2750	2800	0.075	1177	-1940	-763
				2700	2750	0.099	1714	-1952	-238
				2650	2700	0.196	1550	-1922	-372
				2600	2650	0.137	1104	-2502	-1398

NR	GLACIER NAME	YEAR	SYS	ALTITUDE FROM	ALTITUDE TO	AREA KM²	BW MM	BS MM	BN/BA MM
				2550	2600	0.067	787	-2835	-2048
				2500	2550	0.025	906	-2908	-2002
	Summary Data			2500	3150	1.133	1168	-1928	-760
33.9	WURTEN K.	1991	FXD	3100	3150	0.006	1300	-1050	250
	A 0804			3050	3100	0.035	1294	-1243	49
				3000	3050	0.075	1072	-1360	-288
				2950	3000	0.097	917	-1781	-864
				2900	2950	0.093	1062	-2058	-996
				2850	2900	0.118	1220	-2305	-1085
				2800	2850	0.096	1299	-2744	-1145
				2750	2800	0.065	1169	-2614	-1445
				2700	2750	0.099	1379	-1939	-560
				2650	2700	0.195	1446	-1845	-399
				2600	2650	0.137	1382	-3475	-2093
				2550	2600	0.067	1260	-3971	-2711
				2500	2550	0.025	1396	-3857	-2461
	Summary Data			2500	3150	1.108	1258	-2152	-894
33.10	WURTEN K.	1992	FXD	3100	3150	0.006	1200	-1250	-50
	A 0804			3050	3100	0.035	1327	-1589	-262
				3000	3050	0.075	1244	-1907	-663
				2950	3000	0.096	1060	-1915	-855
				2900	2950	0.092	1085	-2117	-1032
				2850	2900	0.115	1274	-2639	-1365
				2800	2850	0.095	1272	-2803	-1531
				2750	2800	0.059	1218	-2932	-1714
				2700	2750	0.099	2034	-2917	-883
				2650	2700	0.194	2318	-2952	-634
				2600	2650	0.138	1751	-3930	-2179
				2550	2600	0.067	1233	-4416	-3183
				2500	2550	0.024	1407	-4332	-2925
	Summary Data			2500	3150	1.094	1550	-2798	-1248
33.11	WURTEN K.	1993	FXD	3100	3150	0.006	1534	-1384	150
	A 0804			3050	3100	0.035	1521	-1371	150
				3000	3050	0.075	1439	-1401	38
				2950	3000	0.096	1404	-1503	-99
				2900	2950	0.092	1314	-1514	-200
				2850	2900	0.115	1330	-1580	-250
				2800	2850	0.095	1363	-1766	-403
				2750	2800	0.059	1304	-1916	-612
				2700	2750	0.099	1683	-1980	-297
				2650	2700	0.194	1917	-2264	-347
				2600	2650	0.138	1507	-2650	-1143
				2550	2600	0.067	1341	-3042	-1701
				2500	2550	0.024	1440	-3093	-1653
	Summary Data			2500	3150	1.094	1513	-1997	-484
33.12	WURTEN K.	1994	FXD	3100	3150	0.006	1375	-1485	-110
	A 0804			3050	3100	0.035	1325	-1966	-641
				3000	3050	0.075	1434	-2456	-1022
				2950	3000	0.096	1367	-2331	-964
				2900	2950	0.092	1250	-2683	-1433
				2850	2900	0.115	1246	-3107	-1861
				2800	2850	0.095	1285	-3475	-2190

NR	GLACIER NAME	YEAR	SYS	ALTITUDE FROM	TO	AREA KM²	BW MM	BS MM	BN/BA MM
				2750	2800	0.059	1269	-3440	-2171
				2700	2750	0.099	1523	-2494	-971
				2650	2700	0.194	1774	-2904	-1130
				2600	2650	0.138	1402	-3697	-2295
				2550	2600	0.067	1207	-4190	-2983
				2500	2550	0.024	1603	-4305	-2702
	Summary Data			2500	3150	1.094	1422	-3039	-1617
33.13	WURTEN K.	1995	FXD	3100	3150	0.006	1800	-1300	500
	A 0804			3050	3100	0.035	1697	-1197	500
				3000	3050	0.075	1585	-1230	355
				2950	3000	0.096	1615	-1456	159
				2900	2950	0.092	1484	-1562	-78
				2850	2900	0.115	1364	-1718	-354
				2800	2850	0.095	1334	-1834	-500
				2750	2800	0.059	1224	-1878	-553
				2700	2750	0.099	1853	-1832	20
				2650	2700	0.194	1683	-1874	-191
				2600	2650	0.138	1400	-2552	-1151
				2550	2600	0.067	1163	-3171	-2007
				2500	2550	0.024	1874	-3850	-1976
	Summary Data			2500	3150	1.094	1545	-1958	-414
	ITALY								
34.1	CARESER	1991	FXD	3200	3330	0.224			-850
	I 0701			3150	3200	0.3			-1290
				3100	3150	1.044			-1520
				3050	3100	0.965			-1740
				3000	3050	0.656			-1960
				2950	3000	0.371			-2190
				2900	2950	0.198			-2410
				2860	2900	0.099			-2630
	Summary Data			2860	3330	3.857			-1730
34.2	CARESER	1992	FXD	3200	3330	0.224			-200
	I 0701			3150	3200	0.3			-700
				3100	3150	1.044			-960
				3050	3100	0.965			-1210
				3000	3050	0.656			-1460
				2950	3000	0.371			-1710
				2900	2950	0.198			-1960
				2860	2900	0.099			-2210
	Summary Data			2860	3330	3.857			-1200
34.3	CARESER	1993	FXD	3200	3330	0.224			540
	I 0701			3150	3200	0.3			110
				3100	3150	1.044			-100
				3050	3100	0.965			-310
				3000	3050	0.656			-520
				2950	3000	0.371			-740
				2900	2950	0.198			-950
				2860	2900	0.099			-1160
	Summary Data			2860	3330	3.857			-300
34.4	CARESER	1994	FXD	3200	3330	0.224			-600
	I 0701			3150	3200	0.3			-1180

NR	GLACIER NAME	YEAR	SYS	ALTITUDE FROM	ALTITUDE TO	AREA KM²	BW MM	BS MM	BN/BA MM
				3100	3150	1.044			-1470
				3050	3100	0.965			-1750
				3000	3050	0.656			-2040
				2950	3000	0.371			-2330
				2900	2950	0.198			-2620
				2860	2900	0.099			-2910
	Summary Data			2860	3330	3.857			-1740
34.5	CARESER	1995	FXD	3200	3330	0.224			-530
	I 0701			3150	3200	0.3			-810
				3100	3150	1.044			-950
				3050	3100	0.965			-1090
				3000	3050	0.656			-1220
				2950	3000	0.371			-1360
				2900	2950	0.198			-1500
				2860	2900	0.099			-1640
	Summary Data			2860	3330	3.857			-1080
	KENYA								
35.1	LEWIS	1991	FXD	4950	5000	0			-400
	KN0008			4900	4950	0.012			-400
				4850	4900	0.05			-850
				4800	4850	0.048			-1150
				4750	4800	0.046			-1230
				4700	4750	0.045			-2520
				4650	470	0.021			-4270
				4600	4650	0.009			-4700
	Summary Data			4600	5000	0.23			-1750
35.2	LEWIS	1992	FXD	4950	5000	0			200
	KN0008			4900	4950	0.012			200
				4850	4900	0.05			300
				4800	4850	0.048			300
				4750	4800	0.046			-490
				4700	4750	0.045			-1170
				4650	4700	0.021			-2160
				4600	4650	0.009			-2600
	Summary Data			4600	5000	0.23			-480
35.3	LEWIS	1993	FXD	4900	4950	0.01			-500
	KN0008			4850	4900	0.046			-1200
				4800	4850	0.044			-1300
				4750	4800	0.044			-2090
				4700	4750	0.038			-2800
				4650	4700	0.018			-3080
				4600	4650	0.006			-3400
	Summary Data			4600	4950	0.2			-1900
35.4	LEWIS	1994	FXD	4900	4950	0.01			560
	KN0008			4850	4900	0.046			250
				4800	4850	0.044			50
				4750	4800	0.044			-290
				4700	4750	0.038			-1310
				4650	4700	0.018			-2030
				4600	4650	0.006			-2350
	Summary Data			4600	4950	0.2			-450

NR	GLACIER NAME	YEAR	SYS	ALTITUDE FROM	ALTITUDE TO	AREA KM²	BW MM	BS MM	BN/BA MM
35.5	LEWIS	1995	FXD	4900	4950	0.01			220
	KN0008			4850	4900	0.046			80
				4800	4850	0.044			-340
				4750	4800	0.044			-590
				4700	4750	0.038			-860
				4650	4700	0.018			-1340
				4600	4650	0.006			-1460
	Summary Data			4600	4950	0.2			-490
	C.I.S.								
36.1	ABRAMOV	1991	FXD	4600	4700	0.84	820	-20	800
	SU4101			4500	4600	0.91	1710	-230	1480
				4400	4500	1.55	1700	-420	1280
				4300	4400	4.89	1650	-750	900
				4200	4300	4.72	1460	-1160	300
				4100	4200	5.13	1250	-1880	-630
				4000	4100	4.01	1060	-2520	-1460
				3900	4000	1.97	870	-3260	-2390
				3800	3900	1.27	690	-4120	-3430
				3700	3800	0.53	520	-5100	-4580
				3600	3700	0.07	360	-6180	-5820
	Summary Data			3600	4700	25.89	1290	-1720	-430
36.2	ABRAMOV	1992	FXD	4600	4700	0.84	930	-30	900
	SU4101			4500	4600	0.91	1950	-160	1790
				4400	4500	1.55	2000	-210	1790
				4300	4400	4.89	2020	-400	1620
				4200	4300	4.72	1840	-680	1160
				4100	4200	5.13	1620	-1300	320
				4000	4100	4.01	1380	-1840	-460
				3900	4000	1.97	1130	-2510	-1380
				3800	3900	1.27	860	-3300	-2440
				3700	3800	0.52	580	-4220	-3640
				3600	3700	0.06	290	-5270	-4980
	Summary Data			3600	4700	25.87	1620	-1220	400
36.3	ABRAMOV	1993	FXD	4600	4700	0.84	1710	-770	940
	SU4101			4500	4600	0.91	1880	-330	1550
				4400	4500	1.55	2080	-500	1580
				4300	4400	4.89	2050	-590	1460
				4200	4300	4.72	1860	-820	1040
				4100	4200	5.13	1620	-1380	240
				4000	4100	4.01	1370	-1880	-510
				3900	4000	1.97	1120	-2540	-1420
				3800	3900	1.27	860	-3340	-2480
				3700	3800	0.51	590	-4300	-3710
				3600	3700	0.05	310	-5390	-5080
	Summary Data			3600	4700	25.89	1640	-1340	300
36.4	ABRAMOV	1994	FXD	4600	4700	0.84	1000	-780	220
	SU4101			4500	4600	0.91	2120	-1090	1030
				4400	4500	1.55	2140	-1240	900
				4300	4400	4.89	2090	-1500	590
				4200	4300	4.72	1860	-1850	10
				4100	4200	5.13	1580	-2500	-920
				4000	4100	4.01	1310	-3070	-1760

NR	GLACIER NAME	YEAR	SYS	ALTITUDE FROM	ALTITUDE TO	AREA KM²	BW MM	BS MM	BN/BA MM
				3900	4000	1.97	1030	-3760	-2730
				3800	3900	1.27	750	-4570	-3820
				3700	3800	0.51	470	-5490	-5020
				3600	3700	0.05	180	-6540	-6360
	Summary Data			3600	4700	25.85	1610	-2360	-750
36.5	ABRAMOV	1995	FXD	4600	4700	0.84	810	-110	700
	SU4101			4500	4600	0.91	1080	-520	560
				4400	4500	1.55	1490	-840	650
				4300	4400	4.89	1580	-950	630
				4200	4300	4.72	1340	-1240	100
				4100	4200	5.13	1030	-2120	-1090
				4000	4100	4.01	920	-2700	-1780
				3900	4000	1.97	620	-3410	-2790
				3800	3900	1.27	440	-4210	-3770
				3700	3800	0.5	280	-5560	-5280
				3650	3700	0.05	180	-5320	-5140
	Summary Data			3650	4700	25.84	1120	-1900	-780
37.1	DJANKUAT	1991	STR	3600	3990	0.228	2310	-1650	660
	SU3010			3500	3600	0.491	3370	-1770	1600
				3400	3500	0.373	2840	-1950	890
				3300	3400	0.375	2660	-2290	370
				3200	3300	0.435	2740	-2670	70
				3100	3200	0.362	2220	-2840	-620
				3000	3100	0.296	2100	-3390	-1290
				2900	3000	0.287	1680	-4550	-2870
				2800	2900	0.186	1410	-5380	-3970
				2698	2800	0.093	1250	-5420	-4170
	Summary Data			2698	3990	3.13	2480	-2790	-310
37.2	DJANKUAT	1992	STR	3600	3990	0.228	1350	-620	730
	SU3010			3500	3600	0.491	2540	-890	1650
				3400	3500	0.373	2210	-1220	990
				3300	3400	0.375	1880	-1470	410
				3200	3300	0.435	2120	-1910	210
				3100	3200	0.362	1900	-2350	-450
				3000	3100	0.296	1940	-2980	-1040
				2900	3000	0.287	1560	-4050	-2490
				2800	2900	0.186	1380	-4690	-3310
				2698	2800	0.093	1340	-4840	-3500
	Summary Data			2698	3990	3.13	1950	-2080	-130
37.3	DJANKUAT	1993	STR	3600	3990	0.187	1970	-730	1240
	SU3010			3500	3600	0.572	4180	-1260	2920
				3400	3500	0.343	3360	-1300	2060
				3300	3400	0.365	3250	-1510	1740
				3200	3300	0.419	3540	-1900	1640
				3100	3200	0.36	3210	-2070	1140
				3000	3100	0.288	3040	-2660	380
				2900	3000	0.286	2460	-3570	-1100
				2800	2900	0.18	2020	-4560	-2540
				2699	2800	0.1	1880	-5260	-3380
	Summary Data			2699	3990	3.1	3180	-2080	1100

NR	GLACIER NAME	YEAR	SYS	ALTITUDE FROM	ALTITUDE TO	AREA KM²	BW MM	BS MM	BN/BA MM
37.4	DJANKUAT	1994	STR	3600	3990	0.187	1590	-890	700
	SU3010			3500	3600	0.572	2970	-1350	1620
				3400	3500	0.343	2160	-1670	490
				3300	3400	0.365	2330	-2150	180
				3200	3300	0.419	2270	-2750	-480
				3100	3200	0.36	1840	-3330	-1490
				3000	3100	0.288	1610	-4240	-2630
				2900	3000	0.286	1330	-5320	-3990
				2800	2900	0.18	1190	-5840	-4650
				2699	2800	0.1	900	-5960	-5060
	Summary Data			2699	3990	3.1	2070	-2910	-840
37.5	DJANKUAT	1995	STR	3600	3990	0.187	1650	-1210	440
	SU3010			3500	3600	0.572	3630	-1170	2460
				3400	3500	0.343	2560	-1420	1140
				3300	3400	0.365	2570	-1680	890
				3200	3300	0.419	2790	-2220	570
				3100	3200	0.36	2270	-2780	-510
				3000	3100	0.288	2320	-3770	-1450
				2900	3000	0.286	1950	-4770	-2820
				2800	2900	0.18	1570	-5140	-3570
				2699	2800	0.1	1480	-5110	-3630
	Summary Data			2699	3990	3.1	2540	2500	40
38.1	GARABASHI	1984	STR	4600	5000	0.228	225	25	250
	SU3031			4500	4600	0.13	320	-40	280
				4400	4500	0.156	370	-70	300
				4300	4400	0.152	415	-115	300
				4200	4300	0.221	500	-120	380
				4100	4200	0.263	730	-130	600
				4000	4100	0.422	1400	-110	1290
				3900	4000	0.628	1590	-90	1500
				3800	3900	0.635	1260	-470	790
				3700	3800	0.489	1200	-990	210
				3600	3700	0.322	1160	-1460	-300
				3500	3600	0.269	1310	-1970	-660
				3400	3500	0.302	1190	-2270	-1080
				3300	3400	0.255	970	-2500	-1530
	Summary Data			3300	5000	4.47	1080	-740	340
38.2	GARABASHI	1985	STR	4600	5000	0.228	160	20	180
	SU3031			4500	4600	0.13	395	-5	390
				4400	4500	0.156	390	-30	360
				4300	4400	0.152	330	-60	270
				4200	4300	0.221	435	-55	380
				4100	4200	0.263	610	-40	570
				4000	4100	0.422	1100	-10	1090
				3900	4000	0.628	1420	-140	1280
				3800	3900	0.635	1060	-800	260
				3700	3800	0.489	650	-1370	-720
				3600	3700	0.322	730	-1860	-1130
				3500	3600	0.269	970	-2320	-1350
				3400	3500	0.302	900	-2800	-1900
				3300	3400	0.255	660	-3170	-2510
	Summary Data			3300	5000	4.47	840	-940	-100

NR	GLACIER NAME	YEAR	SYS	ALTITUDE FROM	ALTITUDE TO	AREA KM²	BW MM	BS MM	BN/BA MM
38.3	GARABASHI	1986	STR	4600	5000	0.228	95	5	100
	SU3031			4500	4600	0.13	195	-195	0
				4400	4500	0.156	235	-255	-20
				4300	4400	0.152	275	-315	-40
				4200	4300	0.221	310	-360	-50
				4100	4200	0.263	580	-370	210
				4000	4100	0.422	1070	-370	700
				3900	4000	0.628	1120	-1040	80
				3800	3900	0.635	970	-1660	-690
				3700	3800	0.489	860	-1910	-1050
				3600	3700	0.322	950	-2170	-1220
				3500	3600	0.269	1130	-2690	-1560
				3400	3500	0.302	1040	-3330	-2290
				3300	3400	0.255	780	-3930	-3150
	Summary Data			3300	5000	4.47	820	-1460	-640
38.4	GARABASHI	1990	STR	4600	5000	0.228	220	20	240
	SU3031			4500	4600	0.13	290	-120	170
				4400	4500	0.156	325	-185	140
				4300	4400	0.152	385	-235	150
				4200	4300	0.221	440	-320	120
				4100	4200	0.263	670	-380	290
				4000	4100	0.422	1210	-340	870
				3900	4000	0.628	1550	-440	1110
				3800	3900	0.635	1400	-860	540
				3700	3800	0.489	1320	-1420	-100
				3600	3700	0.322	1300	-1800	-500
				3500	3600	0.269	1440	-2170	-730
				3400	3500	0.302	1350	-2560	-1210
				3300	3400	0.255	1000	-2810	-1810
	Summary Data			3300	5000	4.47	1110	-1020	90
38.5	GARABASHI	1991	STR	4600	5000	0.228	240	20	260
	SU3031			4500	4600	0.13	325	-45	280
				4400	4500	0.156	360	-100	260
				4300	4400	0.152	365	-215	150
				4200	4300	0.221	510	-300	210
				4100	4200	0.263	720	-340	380
				4000	4100	0.422	1200	-200	1000
				3900	4000	0.628	1630	-380	1250
				3800	3900	0.635	1420	-1230	190
				3700	3800	0.489	1270	-1680	-410
				3600	3700	0.322	1270	-2070	-800
				3500	3600	0.269	1415	-2435	-1020
				3400	3500	0.302	1240	-2830	-1590
				3300	3400	0.255	970	-3140	-2170
	Summary Data			3300	5000	4.47	1110	-1140	-30
38.6	GARABASHI	1992	STR	4600	5000	0.228	205	25	230
	SU3031			4500	4600	0.13	360	-10	350
				4400	4500	0.156	340	-70	270
				4300	4400	0.152	340	-150	190
				4200	4300	0.221	490	-150	340
				4100	4200	0.263	775	-155	620
				4000	4100	0.422	1320	-160	1160

NR	GLACIER NAME	YEAR	SYS	ALTITUDE		AREA	BW	BS	BN/BA
				FROM	TO	KM²	MM	MM	MM
				3900	4000	0.628	1360	-350	1010
				3800	3900	0.635	1090	-860	230
				3700	3800	0.489	940	-1040	-100
				3600	3700	0.322	940	-1410	-470
				3500	3600	0.269	1030	-1700	-670
				3400	3500	0.302	980	-2060	-1080
				3300	3400	0.255	910	-2180	-1270
	Summary Data			3300	5000	4.47	930	-790	140
38.7	GARABASHI	1993	STR	4600	5000	0.228	20	-20	0
	SU3031			4500	4600	0.13	20	-110	-90
				4400	4500	0.156	20	-150	-130
				4300	4400	0.152	20	-220	-200
				4200	4300	0.221	30	-190	-160
				4100	4200	0.263	180	-180	0
				4000	4100	0.422	1440	-80	1360
				3900	4000	0.628	1650	-20	1630
				3800	3900	0.635	1320	-740	580
				3700	3800	0.489	1650	-930	720
				3600	3700	0.322	1490	-1200	290
				3500	3600	0.269	1310	-1940	-630
				3400	3500	0.302	1070	-2200	-1130
				3300	3400	0.255	820	-2410	-1590
	Summary Data			3300	5000	4.47	1050	-740	310
38.8	GARABASHI	1994	STR	4600	5000	0.228	160	20	180
	SU3031			4500	4600	0.13	215	-135	80
				4400	4500	0.156	245	-205	40
				4300	4400	0.152	270	-240	30
				4200	4300	0.221	400	-260	140
				4100	4200	0.263	660	-310	350
				4000	4100	0.422	1090	-380	710
				3900	4000	0.628	1520	-770	750
				3800	3900	0.635	1350	-1620	-270
				3700	3800	0.489	1170	-2180	-1010
				3600	3700	0.322	1080	-2550	-1470
				3500	3600	0.269	1300	-2920	-1620
				3400	3500	0.302	1240	-3320	-2080
				3300	3400	0.255	970	-3600	-2630
	Summary Data			3300	5000	4.47	1010	-1440	-430
38.9	GARABASHI	1995	STR	4600	5000	0.228	220	20	240
	SU3031			4500	4600	0.13	275	-95	180
				4400	4500	0.156	330	-140	190
				4300	4400	0.152	400	-180	220
				4200	4300	0.221	495	-195	300
				4100	4200	0.263	600	-200	400
				4000	4100	0.422	1380	-290	1090
				3900	4000	0.628	1490	-360	1130
				3800	3900	0.635	1130	-1050	80
				3700	3800	0.489	950	-1550	-600
				3600	3700	0.322	1100	-1830	-730
				3500	3600	0.269	1320	-2150	-830
				3400	3500	0.302	1260	-2520	-1260
				3300	3400	0.255	950	-2750	-1800
	Summary Data			3300	5000	4.47	1010	-1020	-10

NR	GLACIER NAME	YEAR	SYS	ALTITUDE FROM	ALTITUDE TO	AREA KM²	BW MM	BS MM	BN/BA MM
39.1	KOZELSKIY	1991	STR	1900	2050	0.12	3790	-1810	1980
	SU8005			1800	1900	0.333	3070	-2310	760
				1700	1800	0.273	4180	-2840	1340
				1600	1700	0.165	4240	-3570	670
				1500	1600	0.11	4210	-4010	200
				1400	1500	0.11	4340	-4840	-500
				1300	1400	0.143	4810	-4240	570
				1200	1300	0.095	2560	-3010	-450
				1100	1200	0.141	1350	-2030	-680
				1000	1100	0.204	1600	-1700	-100
				880	1000	0.106	1500	-1600	-100
	Summary Data			880	2050	1.8	3250	-2790	460
39.2	KOZELSKIY	1992	STR	1900	2050	0.12	3980	-2220	1760
	SU8005			1800	1900	0.333	3310	-2910	400
				1700	1800	0.273	4510	-3800	710
				1600	1700	0.165	4480	-4380	100
				1500	1600	0.11	3020	-5140	-2120
				1400	1500	0.11	2810	-5540	-2730
				1300	1400	0.143	2540	-5120	-2580
				1200	1300	0.095	2160	-4110	-1950
				1100	1200	0.141	2090	-3130	-1040
				1000	1100	0.204	1480	-1650	-270
				880	1000	0.106	1210	-1340	-130
	Summary Data			880	2050	1.8	3060	-3470	-410
39.3	KOZELSKIY	1993	STR	1900	2050	0.12	4200	-2930	1270
	SU8005			1800	1900	0.333	3170	-3020	150
				1700	1800	0.273	4180	-3580	600
				1600	1700	0.165	3900	-3800	100
				1500	1600	0.11	2660	-4070	-1410
				1400	1500	0.11	2420	-4220	-1800
				1300	1400	0.143	2120	-4460	-2340
				1200	1300	0.095	1760	-3380	-1620
				1100	1200	0.141	1770	-2470	-700
				1000	1100	0.204	1190	-1330	-140
				880	1000	0.106	790	-940	-150
	Summary Data			880	2050	1.8	2740	-3090	-350
39.4	KOZELSKIY	1994	STR	1900	2050	0.12	4110	-3460	650
	SU8005			1800	1900	0.333	3930	-3800	130
				1700	1800	0.273	4770	-4520	250
				1600	1700	0.165	4120	-5350	-1230
				1500	1600	0.11	3520	-5550	-2030
				1400	1500	0.11	3530	-6160	-2630
				1300	1400	0.143	3180	-5690	-2510
				1200	1300	0.095	2800	-4530	-1730
				1100	1200	0.141	2610	-3340	-730
				1000	1100	0.204	2030	-2250	-220
				880	1000	0.106	1690	-1810	-120
	Summary Data			880	2050	1.8	3480	-4150	-670
39.5	KOZELSKIY	1995	STR	1900	2050	0.116	3880	-2940	940
	SU8005			1800	1900	0.333	3220	-3080	140
				1700	1800	0.273	4050	-3350	700
				1600	1700	0.165	3230	-3530	-300

NR	GLACIER NAME	YEAR	SYS	ALTITUDE FROM	ALTITUDE TO	AREA KM²	BW MM	BS MM	BN/BA MM
				1500	1600	0.11	2830	-3750	-920
				1400	1500	0.11	2740	-4210	-1470
				1300	1400	0.143	2290	-4010	-1720
				1200	1300	0.095	1950	-3200	-1250
				1100	1200	0.141	1900	-2370	-470
				1000	1100	0.204	1210	-1330	-120
				880	1000	0.1	820	-1050	-230
	Summary Data			880	2050	1.79	2740	-2970	-230
40.1	LEVIY AKTRU	1991	STR	3900	4000	0.15	560	320	880
	SU7102			3800	3900	0.17	540	320	860
				3700	3800	0.36	370	240	610
				3600	3700	0.7	560	140	700
				3500	3600	0.53	610	20	630
				3400	3500	0.56	690	-100	590
				3300	3400	0.71	660	-350	310
				3200	3300	0.49	570	-810	-240
				3100	3200	0.49	450	-1180	-730
				3000	3100	0.4	490	-1820	-1330
				2900	3000	0.57	330	-2370	-2040
				2800	2900	0.53	350	-2700	-2350
				2700	2800	0.22	240	-3380	-3140
				2600	2700	0.07	170	-3570	-3400
	Summary Data			2600	4000	5.95	510	-990	-480
40.2	LEVIY AKTRU	1992	STR	3900	4000	0.15	470	220	690
	SU7102			3800	3900	0.17	500	230	730
				3700	3800	0.36	350	230	580
				3600	3700	0.7	430	160	590
				3500	3600	0.53	620	50	670
				3400	3500	0.56	740	40	780
				3300	3400	0.71	660	-190	470
				3200	3300	0.49	570	-550	20
				3100	3200	0.49	660	-780	-120
				3000	3100	0.4	580	-1040	-460
				2900	3000	0.57	560	-2110	-1550
				2800	2900	0.53	310	-2260	-1950
				2700	2800	0.22	230	-2950	-2720
				2600	2700	0.07	140	-3340	-3200
	Summary Data			2600	4000	5.95	530	-720	-190
40.3	LEVIY AKTRU	1993	STR	3900	4000	0.15	860	330	1190
	SU7102			3800	3900	0.17	720	330	1050
				3700	3800	0.36	550	330	880
				3600	3700	0.7	690	290	980
				3500	3600	0.53	960	90	1050
				3400	3500	0.56	1050	120	1170
				3300	3400	0.71	980	-50	930
				3200	3300	0.49	1020	-360	660
				3100	3200	0.49	1060	-770	290
				3000	3100	0.4	890	-950	-60
				2900	3000	0.57	780	-1670	-890
				2800	2900	0.53	560	-2080	-1520
				2700	2800	0.22	290	-2860	-2570
				2600	2700	0.07	250	-3150	-2900
	Summary Data			2600	4000	5.95	820	-580	240

NR	GLACIER NAME	YEAR	SYS	ALTITUDE FROM	ALTITUDE TO	AREA KM²	BW MM	BS MM	BN/BA MM
40.4	LEVIY AKTRU	1994	STR	3900	4000	0.15	380	290	670
	SU7102			3800	3900	0.17	470	110	580
				3700	3800	0.36	630	-310	320
				3600	3700	0.7	630	-120	510
				3500	3600	0.53	650	-30	620
				3400	3500	0.56	770	-80	690
				3300	3400	0.71	810	-330	480
				3200	3300	0.49	760	-740	20
				3100	3200	0.49	800	-1040	-240
				3000	3100	0.4	760	-1300	-540
				2900	3000	0.57	570	-1950	-1380
				2800	2900	0.53	560	-3120	-2560
				2700	2800	0.22	420	-4270	-3850
				2600	2700	0.07	360	-4460	-4100
	Summary Data			2600	4000	5.95	630	-990	-360
40.5	LEVIY AKTRU	1995	STR	3900	4000	0.15	690	-40	650
	SU7102			3800	3900	0.17	720	-60	660
				3700	3800	0.36	910	-270	440
				3600	3700	0.7	910	-110	800
				3500	3600	0.53	940	20	960
				3400	3500	0.56	1120	0	1120
				3300	3400	0.71	1180	-40	1140
				3200	3300	0.49	1110	-290	820
				3100	3200	0.49	1130	-690	440
				3000	3100	0.4	1020	-1560	-540
				2900	3000	0.57	880	-2390	-1510
				2800	2900	0.53	690	-3170	-2480
				2700	2800	0.22	470	-3980	-3510
				2600	2700	0.07	290	-4340	-4050
	Summary Data			2600	4000	5.95	910	-940	-30
41.1	MALIY AKTRU	1991	STR	3600	3700	0.13	610	-100	510
	SU7100			3500	3600	0.26	650	-380	270
				3400	3500	0.29	860	-440	420
				3300	3400	0.61	760	-720	40
				3200	3300	0.74	570	-1010	-440
				3100	3200	0.16	290	-1370	-1080
				3000	3100	0.12	330	-1580	-1250
				2900	3000	0.08	240	-2030	-1790
				2800	2900	0.03	110	-2150	-2040
				2700	2800	0.06	90	-2340	-2250
				2600	2700	0.04	90	-2460	-2370
				2500	2600	0.06	110	-2710	-2600
				2400	2500	0.05	220	-3350	-3130
				2300	2400	0.06	230	-3920	-3690
				2200	2300	0.04	110	-4380	-4270
	Summary Data			2200	3700	2.73	560	-1100	-540
41.2	MALIY AKTRU	1992	STR	3600	3700	0.13	490	-120	370
	SU7100			3500	3600	0.26	600	-130	470
				3400	3500	0.29	770	-120	650
				3300	3400	0.61	730	-180	550
				3200	3300	0.74	540	-380	160
				3100	3200	0.16	250	-740	-490
				3000	3100	0.12	250	-1100	-850

NR	GLACIER NAME	YEAR	SYS	ALTITUDE FROM	ALTITUDE TO	AREA KM²	BW MM	BS MM	BN/BA MM
				2900	3000	0.08	230	-1540	-1310
				2800	2900	0.03	190	-1990	-1800
				2700	2800	0.06	190	-2390	-2200
				2600	2700	0.04	170	-2790	-2620
				2500	2600	0.06	210	-3140	-2930
				2400	2500	0.05	150	-3550	-3400
				2300	2400	0.06	160	-4100	-3940
				2200	2300	0.04	220	-4700	-4480
	Summary Data			2200	3700	2.73	530	-700	-170
41.3	MALIY AKTRU	1993	STR	3600	3700	0.13	850	10	860
	SU7100			3500	3600	0.26	1120	30	1150
				3400	3500	0.29	1270	110	1380
				3300	3400	0.61	1260	-120	1140
				3200	3300	0.74	870	-290	580
				3100	3200	0.16	460	-660	-200
				3000	3100	0.12	490	-990	-500
				2900	3000	0.08	450	-1370	-920
				2800	2900	0.03	370	-1770	-1400
				2700	2800	0.06	350	-2170	-1820
				2600	2700	0.04	300	-2480	-2180
				2500	2600	0.06	360	-2840	-2480
				2400	2500	0.05	280	-3120	-2840
				2300	2400	0.06	260	-3770	-3510
				2200	2300	0.04	180	-4510	-4330
	Summary Data			2200	3700	2.73	900	-560	340
41.4	MALIY AKTRU	1994	STR	3600	3700	0.13	610	-10	600
	SU7100			3500	3600	0.26	620	90	710
				3400	3500	0.29	760	100	860
				3300	3400	0.61	790	-60	730
				3200	3300	0.74	620	-520	100
				3100	3200	0.16	480	-1280	-800
				3000	3100	0.12	540	-1600	-1060
				2900	3000	0.08	610	-2040	-1430
				2800	2900	0.03	610	-2770	-2160
				2700	2800	0.06	490	-3200	-2710
				2600	2700	0.04	500	-3580	-3080
				2500	2600	0.06	240	-3540	-3300
				2400	2500	0.05	120	-3680	-3560
				2300	2400	0.06	140	-4080	-3940
				2200	2300	0.04	350	-4820	-4470
	Summary Data			2200	3700	2.73	610	-760	-150
41.5	MALIY AKTRU	1995	STR	3600	3700	0.13	810	380	1190
	SU7100			3500	3600	0.26	910	200	1110
				3400	3500	0.29	1040	250	1290
				3300	3400	0.61	950	210	1160
				3200	3300	0.74	740	-510	230
				3100	3200	0.16	610	-1280	-670
				3000	3100	0.12	650	-1560	-910
				2900	3000	0.08	810	-1910	-1100
				2800	2900	0.03	810	-2050	-1240
				2700	2800	0.06	630	-2090	-1460
				2600	2700	0.04	650	-3100	-2450
				2500	2600	0.06	650	-3910	-3260

NR	GLACIER NAME	YEAR	SYS	ALTITUDE FROM	ALTITUDE TO	AREA KM²	BW MM	BS MM	BN/BA MM
				2400	2500	0.05	520	-3940	-3420
				2300	2400	0.06	200	-4060	-3860
				2200	2300	0.04	540	-4940	-4400
	Summary Data			2200	3700	2.73	810	-630	180
42.1	MURAVLEV SU6002	1979		3610	3620	0.027			-620
				3600	3610	0.022			-650
				3590	3600	0.011			-650
				3580	3590	0.009			-660
				3570	3580	0.01			-670
				3560	3570	0.015			-760
				3550	3560	0.015			-880
				3540	3550	0.015			-1000
				3530	3540	0.017			-1130
				3520	3530	0.015			-1250
				3510	3520	0.015			-1340
				3500	3510	0.014			-1360
				3490	3500	0.017			-1380
				3480	3490	0.011			-1440
				3470	3480	0.011			-1530
				3460	3470	0.009			-1630
				3450	3460	0.012			-1740
				3440	3450	0.014			-1710
				3430	3440	0.013			-1670
				3420	3430	0.011			-1670
				3410	3420	0.008			-1700
				3400	3410	0.012			-1730
	Summary Data			3400	3620	0.303			-1140
42.2	MURAVLEV SU6002	1980		3610	3620	0.027			-790
				3600	3610	0.022			-840
				3590	3600	0.011			-880
				3580	3590	0.009			-900
				3570	3580	0.01			-920
				3560	3570	0.015			-1020
				3550	3560	0.015			-1160
				3540	3550	0.015			-1300
				3530	3540	0.017			-1450
				3520	3530	0.015			-1590
				3510	3520	0.015			-1690
				3500	3510	0.014			-1730
				3490	3500	0.017			-1760
				3480	3490	0.011			-1810
				3470	3480	0.011			-1870
				3460	3470	0.009			-1920
				3450	3460	0.012			-1940
				3440	3450	0.014			-1930
				3430	3440	0.013			-1910
				3420	3430	0.011			-1900
				3410	3420	0.008			-1910
				3400	3410	0.011			-1930
	Summary Data			3400	3620	0.302			-1420
42.3	MURAVLEV SU6002	1981		3610	3620	0.027			40
				3600	3610	0.022			30
				3590	3600	0.011			20

NR	GLACIER NAME	YEAR	SYS	ALTITUDE FROM	TO	AREA KM²	BW MM	BS MM	BN/BA MM
				3580	3590	0.009			10
				3570	3580	0.01			-10
				3560	3570	0.015			-100
				3550	3560	0.015			-210
				3540	3550	0.015			-320
				3530	3540	0.017			-460
				3520	3530	0.015			-580
				3510	3520	0.015			-660
				3500	3510	0.014			-690
				3490	3500	0.017			-740
				3480	3490	0.011			-820
				3470	3480	0.011			-940
				3460	3470	0.009			-1060
				3450	3460	0.012			-1190
				3440	3450	0.014			-1190
				3430	3440	0.013			-1180
				3420	3430	0.011			-1170
				3410	3420	0.008			-1190
				3400	3410	0.011			-1200
	Summary Data			3400	3620	0.302			-510
42.4	MURAVLEV	1982		3610	3620	0.027			-420
	SU6002			3600	3610	0.022			-450
				3590	3600	0.011			-480
				3580	3590	0.009			-490
				3570	3580	0.01			-480
				3560	3570	0.015			-610
				3550	3560	0.015			-770
				3540	3550	0.015			-910
				3530	3540	0.017			-1070
				3520	3530	0.015			-1200
				3510	3520	0.015			-1300
				3500	3510	0.014			-1340
				3490	3500	0.017			-1380
				3480	3490	0.011			-1450
				3470	3480	0.011			-1530
				3460	3470	0.009			-1610
				3450	3460	0.012			-1690
				3440	3450	0.014			-1630
				3430	3440	0.013			-1560
				3420	3430	0.011			-1550
				3410	3420	0.008			-1600
				3400	3410	0.011			-1640
	Summary Data			3400	3620	0.302			-1050
42.5	MURAVLEV	1983		3610	3620	0.027			-1040
	SU6002			3600	3610	0.022			-1110
				3590	3600	0.011			-1150
				3580	3590	0.009			-1180
				3570	3580	0.01			-1200
				3560	3570	0.015			-1290
				3550	3560	0.015			-1420
				3540	3550	0.015			-1540
				3530	3540	0.017			-1680
				3520	3530	0.015			-1800
				3510	3520	0.015			-1870

NR	GLACIER NAME	YEAR	SYS	ALTITUDE FROM	TO	AREA KM²	BW MM	BS MM	BN/BA MM
				3500	3510	0.014			-1890
				3490	3500	0.017			-1930
				3480	3490	0.011			-1980
				3470	3480	0.011			-2040
				3460	3470	0.009			-2110
				3450	3460	0.012			-2160
				3440	3450	0.014			-2130
				3430	3440	0.013			-2110
				3420	3430	0.011			-2100
				3410	3420	0.008			-2110
				3400	3410	0.01			-2130
	Summary Data			3400	3620	0.301			-1650
42.6	MURAVLEV	1984		3610	3620	0.027			-740
	SU6002			3600	3610	0.022			-770
				3590	3600	0.011			-780
				3580	3590	0.009			-800
				3570	3580	0.01			-820
				3560	3570	0.015			-890
				3550	3560	0.015			-990
				3540	3550	0.015			-1080
				3530	3540	0.017			-1180
				3520	3530	0.015			-1280
				3510	3520	0.015			-1360
				3500	3510	0.014			-1360
				3490	3500	0.017			-1390
				3480	3490	0.011			-1420
				3470	3480	0.011			-1500
				3460	3470	0.009			-1580
				3450	3460	0.012			-1680
				3440	3450	0.014			-1650
				3430	3440	0.013			-1620
				3420	3430	0.011			-1620
				3410	3420	0.008			-1650
				3400	3410	0.01			-1680
	Summary Data			3400	3620	0.301			-1190
42.7	MURAVLEV	1985		3610	3620	0.027			-1090
	SU6002			3600	3610	0.022			-1070
				3590	3600	0.011			-1060
				3580	3590	0.009			-1060
				3570	3580	0.01			-1080
				3560	3570	0.015			-1170
				3550	3560	0.015			-1240
				3540	3550	0.015			-1240
				3530	3540	0.017			-1250
				3520	3530	0.015			-1420
				3510	3520	0.015			-1650
				3500	3510	0.014			-1640
				3490	3500	0.017			-1680
				3480	3490	0.011			-1730
				3470	3480	0.011			-1820
				3460	3470	0.009			-1920
				3450	3460	0.012			-1980
				3440	3450	0.014			-2030
				3430	3440	0.013			-1990

NR	GLACIER NAME	YEAR	SYS	ALTITUDE FROM	ALTITUDE TO	AREA KM²	BW MM	BS MM	BN/BA MM
				3420	3430	0.011			-1970
				3410	3420	0.008			-1960
				3400	3410	0.009			-1930
	Summary Data			3400	3620	0.300			-1460
42.8	MURAVLEV SU6002	1986		3610	3620	0.027			-970
				3600	3610	0.022			-960
				3590	3600	0.011			-950
				3580	3590	0.009			-980
				3570	3580	0.01			-1020
				3560	3570	0.015			-1130
				3550	3560	0.015			-1190
				3540	3550	0.015			-1170
				3530	3540	0.017			-1180
				3520	3530	0.015			-1320
				3510	3520	0.015			-1490
				3500	3510	0.014			-1510
				3490	3500	0.017			-1610
				3480	3490	0.011			-1690
				3470	3480	0.011			-1830
				3460	3470	0.009			-1920
				3450	3460	0.012			-1970
				3440	3450	0.014			-1970
				3430	3440	0.013			-1870
				3420	3430	0.011			-1810
				3410	3420	0.008			-1800
				3400	3410	0.008			-1760
	Summary Data			3400	3620	0.299			-1380
42.9	MURAVLEV SU6002	1987		3610	3620	0.027			-1130
				3600	3610	0.022			-1120
				3590	3600	0.011			-1120
				3580	3590	0.009			-1050
				3570	3580	0.01			-1010
				3560	3570	0.015			-1120
				3550	3560	0.015			-1190
				3540	3550	0.015			-1170
				3530	3540	0.017			-1180
				3520	3530	0.015			-1300
				3510	3520	0.015			-1390
				3500	3510	0.014			-1390
				3490	3500	0.017			-1510
				3480	3490	0.011			-1690
				3470	3480	0.011			-1910
				3460	3470	0.009			-2010
				3450	3460	0.012			-2050
				3440	3450	0.014			-2050
				3430	3440	0.013			-2040
				3420	3430	0.011			-2030
				3410	3420	0.008			-2020
				3400	3410	0.008			-2010
	Summary Data			3400	3620	0.299			-1430
42.10	MURAVLEV SU6002	1988		3610	3620	0.027			-550
				3600	3610	0.022			-540
				3590	3600	0.011			-530

NR	GLACIER NAME	YEAR	SYS	ALTITUDE FROM	TO	AREA KM²	BW MM	BS MM	BN/BA MM
				3580	3590	0.009			-550
				3570	3580	0.01			-560
				3560	3570	0.015			-660
				3550	3560	0.015			-690
				3540	3550	0.015			-660
				3530	3540	0.017			-680
				3520	3530	0.015			-840
				3510	3520	0.015			-980
				3500	3510	0.014			-970
				3490	3500	0.017			-1020
				3480	3490	0.011			-1100
				3470	3480	0.011			-1300
				3460	3470	0.009			-1340
				3450	3460	0.012			-1450
				3440	3450	0.014			-1400
				3430	3440	0.013			-1450
				3420	3430	0.011			-1450
				3410	3420	0.008			-1440
				3400	3410	0.007			-1440
	Summary Data			3400	3620	0.298			-900
42.11	MURAVLEV SU6002	1989		3610	3620	0.027			-230
				3600	3610	0.022			-250
				3590	3600	0.011			-270
				3580	3590	0.009			-300
				3570	3580	0.01			-290
				3560	3570	0.015			-430
				3550	3560	0.015			-490
				3540	3550	0.015			-430
				3530	3540	0.017			-480
				3520	3530	0.015			-750
				3510	3520	0.015			-910
				3500	3510	0.014			-910
				3490	3500	0.017			-950
				3480	3490	0.011			-1110
				3470	3480	0.011			-1330
				3460	3470	0.009			-1410
				3450	3460	0.012			-1450
				3440	3450	0.014			-1430
				3430	3440	0.013			-1390
				3420	3430	0.011			-1380
				3410	3420	0.008			-1380
				3400	3410	0.007			-1360
	Summary Data			3400	3620	0.298			-760
42.12	MURAVLEV SU6002	1990		3610	3620	0.027			--660
				3600	3610	0.022			-660
				3590	3600	0.011			-720
				3580	3590	0.009			-950
				3570	3580	0.01			-990
				3560	3570	0.015			-1200
				3550	3560	0.015			-1320
				3540	3550	0.015			-1300
				3530	3540	0.017			-1380
				3520	3530	0.015			-1520
				3510	3520	0.015			-1590

NR	GLACIER NAME	YEAR	SYS	ALTITUDE FROM	TO	AREA KM²	BW MM	BS MM	BN/BA MM
				3500	3510	0.014			-1640
				3490	3500	0.017			-1750
				3480	3490	0.011			-1840
				3470	3480	0.011			-1930
				3460	3470	0.009			-1960
				3450	3460	0.012			-2010
				3440	3450	0.014			-2000
				3430	3440	0.013			-1960
				3420	3430	0.011			-1940
				3410	3420	0.008			-1930
				3400	3410	0.006			-1920
	Summary Data			3400	3620	0.297			-1420
42.13	MURAVLEV SU6002	1991		3610	3620	0.027			-1540
				3600	3610	0.022			-1510
				3590	3600	0.011			-1510
				3580	3590	0.009			-1610
				3570	3580	0.001			-1640
				3560	3570	0.015			-1930
				3550	3560	0.015			-2010
				3540	3550	0.015			-1940
				3530	3540	0.017			-2100
				3520	3530	0.015			-2360
				3510	3520	0.015			-2440
				3500	3510	0.014			-2450
				3490	3500	0.017			-2590
				3480	3490	0.011			-2710
				3470	3480	0.011			-2810
				3460	3470	0.009			-2850
				3450	3460	0.012			-2950
				3440	3450	0.014			-2920
				3430	3440	0.013			-2930
				3420	3430	0.011			-2940
				3410	3420	0.008			-2940
				3400	3410	0.006			-2940
	Summary Data			3400	3620	0.297			-2230
	CHINA								
43.1	URUMQIHE E-BR. CN0010	1989	FXD	4250	4269	0.001			456
				4200	4250	0.046			590
				4150	4200	0.099			522
				4100	4150	0.112			446
				4050	4100	0.115			417
				4000	4050	0.147			256
				3950	4000	0.138			172
				3900	3950	0.194			41
				3850	3900	0.155			-199
				3800	3850	0.097			-918
				3750	3800	0.055			-1363
				3740	3750	0.004			-1457
	Summary Data			3740	4269	1.163			99
43.2	URUMQIHE E-BR. CN0010	1990	FXD	4200	4269	0.046			500
				4150	4200	0.099			735
				4100	4150	0.112			584
				4050	4100	0.115			313

NR	GLACIER NAME	YEAR	SYS	ALTITUDE FROM	TO	AREA KM²	BW MM	BS MM	BN/BA MM
				4000	4050	0.147			300
				3950	4000	0.138			249
				3900	3950	0.194			226
				3850	3900	0.155			-400
				3800	3850	0.097			-1054
				3740	3800	0.054			-1849
	Summary Data			3740	4269	1.163			18
43.3	URUMQIHE E-BR. CN0010	1991	FXD	4150	4269	0.145			47
				4100	4150	0.112			86
				4050	4100	0.115			-147
				4000	4050	0.147			-546
				3950	4000	0.138			-444
				3900	3950	0.194			-612
				3850	3900	0.155			-1185
				3800	3850	0.097			-1949
				3750	3800	0.055			-2574
				3740	3750	0.004			-2880
	Summary Data			3740	4269	1.163			-734
43.4	URUMQIHE E-BR. CN0010	1992	FXD	4150	4269	0.145			616
				4100	4150	0.112			618
				4050	4100	0.115			474
				4000	4050	0.147			155
				3950	4000	0.138			196
				3900	3950	0.194			161
				3850	3900	0.155			-148
				3800	3850	0.097			-870
				3750	3800	0.055			-1492
				3740	3750	0.004			-2202
	Summary Data			3740	4269	1.163			15
43.5	URUMQIHE E-BR. CN0010	1993	FXD	4150	4269	0.145			504
				4100	4150	0.112			492
				4050	4100	0.115			310
				4000	4050	0.147			97
				3950	4000	0.138			172
				3900	3950	0.194			89
				3850	3900	0.155			-218
				3800	3850	0.097			-1200
				3750	3800	0.055			-1801
				3740	3750	0.004			-2489
	Summary Data			3740	4269	1.163			-34
43.6	URUMQIHE E-BR. CN0010	1994	FXD	4150	4269	0.145			533
				4100	4150	0.112			509
				4050	4100	0.115			9
				4000	4050	0.147			-167
				3950	4000	0.138			-169
				3900	3950	0.194			-350
				3850	3900	0.155			-991
				3800	3850	0.097			-1895
				3750	3800	0.055			-2325
				3740	3750	0.004			-2988
	Summary Data			3740	4269	1.163			-384

NR	GLACIER NAME	YEAR	SYS	ALTITUDE FROM	ALTITUDE TO	AREA KM²	BW MM	BS MM	BN/BA MM
43.7	URUMQIHE E-BR.	1995	FXD	4150	4269	0.145			293
	CN0010			4100	4150	0.112			327
				4050	4100	0.115			97
				4000	4050	0.147			22
				3950	4000	0.138			14
				3900	3950	0.194			-134
				3850	3900	0.155			-759
				3800	3850	0.097			-1404
				3750	3800	0.055			-1803
				3740	3750	0.004			-2157
	Summary Data			3740	4269	1.163			-225
44.1	URUMQIHE W-BR.	1989	FXD	4450	4486	0.011			726
	CN0010			4400	4450	0.027			1154
				4350	4400	0.04			1080
				4300	4350	0.041			773
				4250	4300	0.037			813
				4200	4250	0.037			776
				4150	4200	0.044			597
				4100	4150	0.055			540
				4050	4100	0.116			225
				4000	4050	0.107			10
				3950	4000	0.073			-204
				3900	3950	0.047			-825
				3850	3900	0.024			-1146
				3810	3850	0.018			-1429
	Summary Data			3810	4486	0.677			110
44.2	URUMQIHE W-BR.	1990	FXD	4450	4486	0.011			539
	CN0010			4400	4450	0.027			564
				4350	4400	0.04			718
				4300	4350	0.041			766
				4250	4300	0.037			660
				4200	4250	0.037			710
				4150	4200	0.044			761
				4100	4200	0.055			502
				4050	4100	0.116			120
				4000	4050	0.107			77
				3950	4000	0.073			-354
				3900	3950	0.047			-603
				3850	3900	0.024			-1518
				3810	3850	0.018			-1496
	Summary Data			3810	4486	0.677			110
44.3	URUMQIHE W-BR.	1991	FXD	4400	4486	0.038			142
	CN0010			4350	4400	0.04			142
				4300	4350	0.041			265
				4250	4300	0.037			172
				4200	4250	0.037			43
				4150	4200	0.044			6
				4100	4150	0.055			41
				4050	4100	0.116			-484
				4000	4050	0.107			-760
				3950	4000	0.073			-1422
				3900	3950	0.047			-1928
				3850	3900	0.024			-2582

NR	GLACIER NAME	YEAR	SYS	ALTITUDE FROM	TO	AREA KM²	BW MM	BS MM	BN/BA MM
				3810	3850	0.018			-2480
	Summary Data			3810	4486	0.677			-657
44.4	URUMQIHE W-BR.	1992	FXD	4400	4486	0.038			504
	CN0010			4300	4400	0.081			504
				4250	4300	0.037			706
				4200	4250	0.037			883
				4150	4200	0.044			590
				4100	4150	0.055			558
				4050	4100	0.116			90
				4000	4050	0.107			32
				3950	4000	0.073			-333
				3900	3950	0.047			-777
				3850	3900	0.024			-1682
				3810	3850	0.018			-1684
	Summary Data			3810	4486	0.677			37
44.5	URUMQIHE W-BR.	1993	FXD	4400	4486	0.038			406
	CN0010			4350	4400	0.04			406
				4300	4350	0.041			436
				4250	4300	0.037			568
				4200	4250	0.037			518
				4150	4200	0.044			362
				4100	4150	0.055			395
				4050	4100	0.116			146
				4000	4050	0.107			3
				3950	4000	0.073			-404
				3900	3950	0.047			-842
				3850	3900	0.024			-2045
				3810	3850	0.018			-2220
	Summary Data			3810	4486	0.677			-20
44.6	URUMQIHE W-BR.	1994	FXD	4400	4486	0.038			532
	CN0010			4350	4400	0.04			532
				4300	4350	0.041			520
				4250	4300	0.037			323
				4200	4250	0.037			388
				4150	4200	0.044			175
				4100	4150	0.055			305
				4050	4100	0.116			-165
				4000	4050	0.107			-588
				3950	4000	0.073			-1127
				3900	3950	0.047			-1545
				3850	3900	0.024			-2643
				3810	3850	0.018			-2498
	Summary Data			3810	4486	0.677			-367
44.7	URUMQIHE W-BR.	1995	FXD	4400	4486	0.038			90
	CN0010			4350	4400	0.04			90
				4300	4350	0.041			140
				4250	4300	0.037			270
				4200	4250	0.037			263
				4150	4200	0.044			153
				4100	4150	0.055			158
				4050	4100	0.116			35
				4000	4050	0.107			-234

NR	GLACIER NAME	YEAR	SYS	ALTITUDE		AREA	BW	BS	BN/BA
				FROM	TO	KM²	MM	MM	MM
				3950	4000	0.073			-814
				3900	3950	0.047			-1212
				3850	3900	0.024			-1161
				3810	3850	0.018			-1949
	Summary Data			3810	4486	0.677			-233

Notes

WORLD GLACIER MONITORING SERVICE

CHANGES IN AREA, VOLUME AND THICKNESS

TABLE D

NR	Record number
GLACIER NAME	15 alphabetic or numeric digits
PERIOD FROM TO	Period in which the changes take place
ALTITUDE	Altitude interval in meters above sea level
AREA MEAN	Mean area of altitude interval for period of change (thousand square meters)
AREA CHANGE	Change in area of altitude interval for period of change (thousand square meters)
VOLUME CHANGE	Change in volume of altitude interval for period of change (thousand cubic meters)
THICK CHANGE	Change in thickness of altitude interval for period of change (millimeters)

NR	GLACIER NAME	PERIOD FROM	PERIOD TO	ALTITUDE FROM	ALTITUDE TO	AREA MEAN	AREA CHANGE	VOLUME CHANGE	THICKNESS CHANGE
	U.S.A.								
1.1	MCCALL	1972	1993	2400	2500	110		-248	-2257
	US00001			2300	2400	720		-1383	-1921
				2200	2300	1160		-4284	-3693
				2100	2200	1360		-6126	-4504
				2000	2100	890		-5019	-5639
				1900	2000	810		-5110	-6308
				1800	1900	530		-4286	-8086
				1700	1800	450		-5070	-11267
				1600	1700	600		-11774	-19624
				1500	1600	360		-9733	-27037
				1400	1500	240		-8730	-36374
	Summary Data			1400	2500	7230		-61762	-8543
	SWITZERLAND								
2.1	GRIES (AEGINA)	1923	1961	3300	3400	16	-7	-146	-9120
	CH00003			3200	3300	201	-68	-2062	-10260
				3100	3200	772	-239	-11148	-14440
				3000	3100	1572	2	-28673	-18240
				2900	3000	1040	-25	-19760	-19000
				2800	2900	813	-61	-18227	-22420
				2700	2800	699	-94	-21250	-30400
				2600	2700	1303	-221	-45553	-34960
				2500	2600	613	-50	-28419	-46360
				2400	2500	716	-419	-56048	-78280
				2300	2400	112	-15	-22387	-199880
	Summary Data			2300	3400	7857	-1167	-247810	-31540
2.2	GRIES (AEGINA)	1961	1979	3300	3400	9	1	3	360
	CH00003			3200	3300	133	3	72	540
				3100	3200	533	14	1055	1980
				3000	3100	1574	23	4533	2880
				2900	3000	1015	-11	4385	4320
				2800	2900	752	-26	3384	4500
				2700	2800	605	-62	436	720
				2600	2700	1082	-98	-7596	-7020
				2500	2600	563	45	-5472	-9720
				2400	2500	297	-112	-8874	-29880
				2300	2400	127	-123	-9304	-73260
	Summary Data			2300	3400	6690	-353	-12042	-1800
2.3	GRIES (AEGINA)	1979	1986	3300	3400	10	0	-40	-3990
	CH00003			3200	3300	130	-40	-355	-2730
				3100	3200	547	-117	-3853	-7043
				3000	3100	1597	69	-1006	-630
				2900	3000	1004	57	-2038	-2030
				2800	2900	726	1	-2185	-3010
				2700	2800	543	30	-1368	-2520
				2600	2700	984	-134	-4890	-4970
				2500	2600	608	70	-2724	-4480
				2400	2500	184	-20	-1468	-7980
				2300	2400	4	-4		
	Summary Data			2300	3400	6337	-88	-16413	-2590
2.4	GRIES (AEGINA)	1986	1991	3300	3400	10	0	14	1350
	CH00003			3200	3300	90	116	-266	-2950

NR	GLACIER NAME	PERIOD FROM TO	ALTITUDE FROM	ALTITUDE TO	AREA MEAN	AREA CHANGE	VOLUME CHANGE	THICKNESS CHANGE
			3100	3200	430	262	-1699	-3950
			3000	3100	1666	-66	-8580	-5150
			2900	3000	1061	-67	-6154	-5800
			2800	2900	727	-69	-4435	-6100
			2700	2800	573	-116	-3495	-6100
			2600	2700	850	-231	-7098	-8350
			2500	2600	678	127	-7831	-11550
			2400	2500	164	-11	-1796	-10950
	Summary Data		2400	3400	6249	-55	-41556	-6650
	AUSTRIA							
3.1	HINTEREIS F.	1979 1991	3700	3800	3	-1	-2	-667
	A00209		3600	3700	52	-4	-82	-1576
			3500	3600	48	-16	-58	-1208
			3400	3500	229	-50	-944	-4122
			3300	3400	701	-66	-2694	-3843
			3200	3300	975	-110	-5155	-5287
			3100	3200	1535	-260	-9390	-6117
			3000	3100	1469	-181	-11802	-8034
			2900	3000	1221	-112	-12738	-10432
			2800	2900	909	-64	-12846	-14132
			2700	2800	968	-70	-11516	-11897
			2600	2700	662	-19	-9636	-14556
			2500	2600	280	19	-6046	-21593
			2400	2500	156	-39	-2529	-16212
			2300	2400	9	-18	-48	-5333
	Summary Data		2300	3800	9217	-991	-85486	-9275
	C.I.S.							
4.1	DJANKUAT	1984 1992	3600	3990	207	-41	303	1465
	SU03010		3500	3600	532	81	-363	-683
			3400	3500	358	-30	-165	-460
			3300	3400	370	-10	404	1092
			3200	3300	427	-16	439	1027
			3100	3200	361	-2	-466	-1290
			3000	3100	292	-8	109	374
			2900	3000	286	-1	-589	-2059
			2800	2900	183	-6	-754	-4121
			2698	2800	97	7	-510	-5258
	Summary Data		2698	3990	3113	-26	-1592	-511
5.1	MURAVLEV	1981 1982	3610	3620	27		1	40
	SU06002		3600	3610	22		4	170
			3590	3600	11		3	290
			3580	3590	9		3	380
			3570	3580	10		4	370
			3560	3570	15		5	320
			3550	3560	15		3	190
			3540	3550	15		1	60
			3530	3540	17		-2	-120
			3520	3530	15		-4	-280
			3510	3520	15		-6	-420
			3500	3510	14		-7	-520
			3490	3500	17		-10	-560
			3480	3490	11		-6	-550
			3470	3480	11		-6	-550

NR	GLACIER NAME	PERIOD FROM TO	ALTITUDE FROM	TO	AREA MEAN	AREA CHANGE	VOLUME CHANGE	THICKNESS CHANGE
			3460	3470	9		-5	-560
			3450	3460	12		-7	-580
			3440	3450	14		-8	-550
			3430	3440	13		-7	-520
			3420	3430	11		-6	-520
			3410	3420	8		-4	-530
			3400	3410	11		-6	-550
	Summary Data		3400	3620	302		-60	-150
5.2	MURAVLEV	1982 1983	3610	3620	27		-21	-770
	SU06002		3600	3610	22		-17	-770
			3590	3600	11		-8	-760
			3580	3590	9		-7	-750
			3570	3580	10		-8	-750
			3560	3570	15		-11	-720
			3550	3560	15		-10	-690
			3540	3550	15		-10	-680
			3530	3540	17		-11	-660
			3520	3530	15		-10	-650
			3510	3520	15		-9	-630
			3500	3510	14		-9	-650
			3490	3500	17		-12	-710
			3480	3490	11		-8	-740
			3470	3480	11		-8	-770
			3460	3470	9		-7	-800
			3450	3460	12		-10	-840
			3440	3450	14		-12	-870
			3430	3440	13		-11	-880
			3420	3430	11		-10	-880
			3410	3420	8		-7	-890
			3400	3410	10	-1	-9	-880
	Summary Data		3400	3620	301	-1	-225	-740
5.3	MURAVLEV	1983 1984	3610	3620	27		-16	-580
	SU06002		3600	3610	22		-14	-620
			3590	3600	11		-7	-650
			3580	3590	9		-6	-660
			3570	3580	10		-6	-640
			3560	3570	15		-10	-660
			3550	3560	15		-10	-660
			3540	3550	15		-10	-650
			3530	3540	17		-11	-630
			3520	3530	15		-9	-610
			3510	3520	15		-9	-600
			3500	3510	14		-8	-580
			3490	3500	17		-10	-570
			3480	3490	11		-6	-570
			3470	3480	11		-6	-590
			3460	3470	9		-5	-610
			3450	3460	12		-8	-650
			3440	3450	14		-8	-600
			3430	3440	13		-7	-570
			3420	3430	11		-6	-570
			3410	3420	8		-5	-590
			3400	3410	10		-6	-630
	Summary Data		3400	3620	301		-183	-620

NR	GLACIER NAME	PERIOD FROM TO	ALTITUDE FROM	ALTITUDE TO	AREA MEAN	AREA CHANGE	VOLUME CHANGE	THICKNESS CHANGE
5.4	MURAVLEV	1984 1985	3610	3620	27		-21	-770
	SU06002		3600	3610	22		-16	-720
			3590	3600	11		-8	-700
			3580	3590	9		-6	-650
			3570	3580	10		-6	-630
			3560	3570	15		-10	-690
			3550	3560	15		-11	-730
			3540	3550	15		-11	-740
			3530	3540	17		-13	-760
			3520	3530	15		-12	-800
			3510	3520	15		-13	-840
			3500	3510	14		-11	-780
			3490	3500	17		-14	-840
			3480	3490	11		-11	-970
			3470	3480	11		-11	-1040
			3460	3470	9		-10	-1070
			3450	3460	12		-13	-1090
			3440	3450	14		-15	-1060
			3430	3440	13		-14	-1040
			3420	3430	11		-11	-1040
			3410	3420	8		-8	-1030
			3400	3410	9	-1	-9	-1030
	Summary Data		3400	3620	300	-1	-254	-830
5.5	MURAVLEV	1985 1986	3610	3620	27		-17	-620
	SU06002		3600	3610	22		-14	-640
			3590	3600	11		-7	-630
			3580	3590	9		-5	-610
			3570	3580	10		-6	-600
			3560	3570	15		-9	-620
			3550	3560	15		-9	-620
			3540	3550	15		-9	-620
			3530	3540	17		-11	-630
			3520	3530	15		-9	-600
			3510	3520	15		-9	-600
			3500	3510	14		-9	-640
			3490	3500	17		-12	-720
			3480	3490	11		-9	-820
			3470	3480	11		-9	-860
			3460	3470	9		-9	-960
			3450	3460	12		-12	-1020
			3440	3450	14		-15	-1070
			3430	3440	13		-15	-1130
			3420	3430	11		-12	-1140
			3410	3420	8		-9	-1150
			3400	3410	8	-1	-9	-1160
	Summary Data		3400	3620	299	-1	-225	-740
5.6	MURAVLEV	1986 1987	3610	3620	27		-18	-680
	SU06002		3600	3610	22		-14	-630
			3590	3600	11		-7	-600
			3580	3590	9		-5	-560
			3570	3580	10		-5	-530
			3560	3570	15		-9	-580
			3550	3560	15		-9	-620
			3540	3550	15		-9	-630

NR	GLACIER NAME	PERIOD FROM TO	ALTITUDE FROM	TO	AREA MEAN	AREA CHANGE	VOLUME CHANGE	THICKNESS CHANGE
			3530	3540	17		-11	-630
			3520	3530	15		-9	-600
			3510	3520	15		-9	-570
			3500	3510	14		-8	-550
			3490	3500	17		-10	-610
			3480	3490	11		-8	-740
			3470	3480	11		-10	-950
			3460	3470	9		-10	-1060
			3450	3460	12		-12	-1000
			3440	3450	14		-13	-930
			3430	3440	13		-12	-900
			3420	3430	11		-10	-890
			3410	3420	8		-7	-890
			3400	3410	8		-7	-880
	Summary Data		3400	3620	299		-212	-690
5.7	MURAVLEV SU06002	1987 1988	3610	3620	27		3	100
			3600	3610	22		3	120
			3590	3600	11		1	60
			3580	3590	9		1	70
			3570	3580	10		1	140
			3560	3570	15		2	110
			3550	3560	15		2	110
			3540	3550	15		2	130
			3530	3540	17		2	150
			3520	3530	15		2	110
			3510	3520	15		1	40
			3500	3510	14		-2	-150
			3490	3500	17		-4	-230
			3480	3490	11		-3	-240
			3470	3480	11		-3	-310
			3460	3470	9		-3	-330
			3450	3460	12		-5	-450
			3440	3450	14		-7	-510
			3430	3440	13		-6	-500
			3420	3430	11		-5	-490
			3410	3420	8		-4	-490
			3400	3410	7	-1	-3	-480
	Summary Data		3400	3620	298	-1	-25	-80
5.8	MURAVLEV SU06002	1988 1989	3610	3620	27		-3	-120
			3600	3610	22		-4	-190
			3590	3600	11		-2	-190
			3580	3590	9		0	-30
			3570	3580	10		0	20
			3560	3570	15		-2	-120
			3550	3560	15		-3	-200
			3540	3550	15		-4	-240
			3530	3540	17		-4	-260
			3520	3530	15		-5	-330
			3510	3520	15		-6	-370
			3500	3510	14		-5	-390
			3490	3500	17		-7	-390
			3480	3490	11		-5	-450
			3470	3480	11		-6	-520
			3460	3470	9		-5	-570

NR	GLACIER NAME	PERIOD FROM TO	ALTITUDE FROM	ALTITUDE TO	AREA MEAN	AREA CHANGE	VOLUME CHANGE	THICKNESS CHANGE
			3450	3460	12		-7	-600
			3440	3450	14		-10	-730
			3430	3440	13		-10	-790
			3420	3430	11		-9	-820
			3410	3420	8		-7	-840
			3400	3410	7		-6	-860
	Summary Data		3400	3620	298		-110	-340
5.9	MURAVLEV	1989 1990	3610	3620	27		0	-10
	SU06002		3600	3610	22		2	110
			3590	3600	11		1	90
			3580	3590	9		-1	-90
			3570	3580	10		-1	-110
			3560	3570	15		-6	-370
			3550	3560	15		-7	-510
			3540	3550	15		-7	-490
			3530	3540	17		-9	-590
			3520	3530	15		-10	-690
			3510	3520	15		-10	-680
			3500	3510	14		-11	-760
			3490	3500	17		-15	-880
			3480	3490	11		-9	-860
			3470	3480	11		-9	-820
			3460	3470	9		-8	-840
			3450	3460	12		-12	-960
			3440	3450	14		-14	-1020
			3430	3440	13		-12	-950
			3420	3430	11		-10	-930
			3410	3420	8		-7	-920
			3400	3410	6	-1	-5	-910
	Summary Data		3400	3620	297	-1	-165	-530
5.1	MURAVLEV	1990 1991	3610	3620	27		-33	-1220
	SU06002		3600	3610	22		-25	-1160
			3590	3600	11		-13	-1180
			3580	3590	9		-12	-1300
			3570	3580	10		-13	-1350
			3560	3570	15		-22	-1430
			3550	3560	15		-22	-1430
			3540	3550	15		-22	-1430
			3530	3540	17		-26	-1500
			3520	3530	15		-24	-1600
			3510	3520	15		-25	-1650
			3500	3510	14		-22	-1540
			3490	3500	17		-25	-1490
			3480	3490	11		-19	-1690
			3470	3480	11		-22	-1990
			3460	3470	9		-19	-2140
			3450	3460	12		-26	-2180
			3440	3450	14		-31	-2200
			3430	3440	13		-27	-2080
			3420	3430	11		-22	-2030
			3410	3420	8		-16	-2020
			3400	3410	6		-12	-1990
	Summary Data		3400	3620	297		-478	-1590

NR	GLACIER NAME	PERIOD FROM	PERIOD TO	ALTITUDE FROM	ALTITUDE TO	AREA MEAN	AREA CHANGE	VOLUME CHANGE	THICKNESS CHANGE
6.1	SHUMSKIY	1989	1990	3720	3740	96		-42	-440
	SU06001			3700	3720	114		-42	-370
				3680	3700	145		-46	-320
				3660	3680	111		-32	-290
				3640	3660	77		-30	-390
				3620	3640	89		-34	-380
				3600	3620	76		-29	-380
				3580	3600	76		-20	-260
				3560	3580	92		-28	-300
				3540	3560	104		6	60
				3520	3540	113		-14	-120
				3500	3520	42		-24	-580
				3480	3500	35		-26	-750
				3460	3480	43		-36	-840
				3440	3460	58		-57	-990
				3420	3440	92		-87	-950
				3400	3420	52		-49	-940
				3380	3400	38		-27	-700
				3360	3380	31		-18	-570
				3340	3360	34		-27	-800
				3320	3340	53		-45	-850
				3300	3320	46		-45	-980
				3280	3300	26		-28	-1060
				3260	3280	20		-20	-1020
				3240	3260	23		-28	-1200
				3220	3240	26		-36	-1400
				3200	3220	27		-59	-2190
				3180	3200	23		-54	-2370
				3160	3180	13	-1	-35	-2690
				3140	3160	4	-1	-11	-2740
	Summary Data			3140	**3740**	1779	-2	-1023	-600
6.2	SHUMSKIY	1990	1991	3720	3740	96		-76	-790
	SU06001			3700	3720	114		-89	-780
				3680	3700	145		-115	-790
				3660	3680	111		-84	-760
				3640	3660	77		-59	-770
				3620	3640	89		-82	-920
				3600	3620	76		-71	-940
				3580	3600	76		-65	-850
				3560	3580	92		-114	-1240
				3540	3560	104		-177	-1700
				3520	3540	113		-209	-1850
				3500	3520	42		-69	-1650
				3480	3500	35		-54	-1530
				3460	3480	43		-67	-1550
				3440	3460	58		-103	-1780
				3420	3440	92		-187	-2030
				3400	3420	52		-115	-2210
				3380	3400	38		-90	-2370
				3360	3380	31		-74	-2400
				3340	3360	34		-67	-1960
				3320	3340	53		-99	-1870
				3300	3320	46		-97	-2110
				3280	3300	26		-56	-2170
				3260	3280	20		-44	-2220

NR	GLACIER NAME	PERIOD FROM TO	ALTITUDE FROM	ALTITUDE TO	AREA MEAN	AREA CHANGE	VOLUME CHANGE	THICKNESS CHANGE
			3240	3260	23		-47	-2060
			3220	3240	26		-51	-1980
			3200	3220	27		-63	-2340
			3180	3200	22	-1	-56	-2560
			3160	3180	12	-1	-26	-2210
			3140	3160	3	-1	-7	-2240
	Summary Data		3140	3740	1776	-3	-2513	-1420
7.1	TS.TUYUKSUYSK	1990 1991	3800	3820	117		-117	-1000
	SU05075		3780	3800	150		-159	-1060
			3760	3780	184		-206	-1120
			3740	3760	200		-234	-1170
			3720	3740	166		-184	-1110
			3700	3720	138		-135	-980
			3680	3700	73		-88	-1200
			3660	3680	51		-72	-1410
			3640	3660	54		-62	-1150
			3620	3640	48		-55	-1140
			3600	3620	70		-73	-1040
			3580	3600	55		-70	-1280
			3560	3580	99		-144	-1460
			3540	3560	56		-96	-1710
			3520	3540	54		-111	-2060
			3500	3520	53		-118	-2220
			3480	3500	50		-129	-2590
			3460	3480	37		-120	-3230
	Summary Data		3460	3820	1655		-2173	-1330
7.2	TS.TUYUKSUYSK	1991 1992	3800	3820	117		-35	-300
	SU05075		3780	3800	150		-39	-260
			3760	3780	184		-52	-280
			3740	3760	200		-74	-370
			3720	3740	166		-70	-420
			3700	3720	138		-63	-460
			3680	3700	73		-48	-660
			3660	3680	51		-38	-740
			3640	3660	54		-42	-770
			3620	3640	48		-37	-770
			3600	3620	70		-57	-820
			3580	3600	55		-51	-930
			3560	3580	99		-130	-1310
			3540	3560	56		-88	-1570
			3520	3540	54		-89	-1650
			3500	3520	48	-5	-96	-1990
			3480	3500	40	-10	-91	-2270
			3460	3480	17	-20	-38	-2230
	Summary Data		3460	3820	1620	-35	-1138	-790
7.3	TS.TUYUKSUYSK	1992 1993	3800	3820	117			
	SU05075		3780	3800	150		134	891
			3760	3780	184		213	1160
			3740	3760	200		252	1259
			3720	3740	166		196	1180
			3700	3720	138		183	1324
			3680	3700	73		104	1431
			3660	3680	51		58	1141

NR	GLACIER NAME	PERIOD FROM TO	ALTITUDE FROM	TO	AREA MEAN	AREA CHANGE	VOLUME CHANGE	THICKNESS CHANGE
			3640	3660	54		46	846
			3620	3640	48		40	835
			3600	3620	70		61	866
			3580	3600	55		40	734
			3560	3580	99		69	696
			3540	3560	56		32	567
			3520	3540	54		22	400
			3500	3520	48		-2	-38
			3480	3500	40		-27	-681
			3460	3480	15	-2	-15	-973
	Summary Data		3460	3820	1618	2	1406	936
	NEPAL							
8.1	AX010	1978 1991	5340	5360	6	-2		
	NP00005		5320	5340	12	-2		
			5300	5320	12	-2		
			5280	5300	29	-8		
			5260	5280	65	-23	-97	-1500
			5240	5260	101	-9	-324	-3200
			5220	5240	62	7	-353	-5700
			5200	5220	60	4	-576	-9600
			5180	5200	35	3	-378	-109000
			5160	5180	24	-3	-278	-11400
			5140	5160	19	-3	-229	-11800
			5120	5140	15	3	-232	-15900
			5100	5120	16	-6	-271	-16700
			5080	5100	20	-7	-354	-17900
			5060	5080	31	-16	-564	-18500
			5040	5060	21	7	-387	-18800
			5020	5040	15	-2	-321	-21000
			5000	5020	15	-4	-355	-23200
			4980	5000	7	2	-145	-21700
			4960	4980	3	1	-51	-17500
			4952	4960	1	0	-18	-17500
	Summary Data		4952	5360	568	-58	-4934	-8689

WORLD GLACIER MONITORING SERVICE

ALPHABETIC INDEX

GLACIER NAME	15 alphabetic or numeric digits, names arranged in alphabetic order
PSFG NUMBER	5 digits identifying glacier with alphabetic prefix denoting country
DATA BASE NR	5 digits, identifying glacier in the WGMS-data base
DATA TABLE AND RECORD NUMBER	Table and record number where data are located

A = General information on the observed glacier
B = Variations in the position of glacier fronts: 1990-1995
BB = Variations in the position of glacier fronts: addenda from earlier years
C = Mass balance summary data: 1990-1995
CC = Mass balance summary data: addenda from earlier years
CCC = Mass balance versus altitude for selected glaciers
D = Changes in area, volume and thickness
F = Index measurements or special events - see Chapter 7

GLACIER NAME	PSFG-NR	DATA BASE NR	DATA TABLE AND RECORD NUMBER							
AALFOTBREEN	N 36204	317	A.119			C.27		CCC.6		
ABEL	NZ 893A3	1546	A.556	B.455						
ABRAMOV	SU0 4101	732	A.508	B.418		C.71		CCC.36		
ADAMS	NZ 08974	1613	A.557	B.456						
AEU.PIRCHLKAR	A 00229	504	A.290	B.205						
AGNELLO	I 00029	684	A.416	B.331						
ALFOMBRALESE	CO 0013B	1533	A.23		BB.1					
ALIBEKSKIY	SU 03002	699	A.509	B.419						
ALING	PK 00035	1630	A.541	B.445	BB.59					F
ALLALIN	CH 00011	394	A.172	B.92						
ALMER	NZ 888B1	1548	A.558	B.457						
ALP.KRAEUL F.	A 00321	594	A.291	B.206						
ALPEINER F.	A 00307	497	A.292	B.207						
ALPETLI(KANDER)	CH 00109	439	A.173	B.93						
ALTA (VEDRETTA)	I 00730	632	A.417	B.332						
AMALIA	RC 00056	1653	A.37		BB.9					
AMMERTEN	CH 00111	435	A.174	B.94						
AMOLA	I 00644	638	A.418	B.333						
ANDOLLA NORD	I 00336	617	A.419	B.334						
ANDY	NZ 863C1	1590	A.559	B.458						
ANTELAO INF.	I 00967	642	A.420	B.335						
ANTELAO SUP.	I 00966	643	A.421	B.336						
ANTIZANA15 ALPHA	EC 00001	1624	A.31			C.15				
ARGENTIERE	F 00002	354	A.165	B.86						
AROLLA (BAS)	CH 00027	377	A.175	B.95						
ASHBURTON	NZ 688A1	1570	A.560	B.459						
ASIA	RC 00055	1652	A.38		BB.10					
AU.BROEGGERBR.	N 15504	292	A.120			C.28	CC.4	CCC.7		
AURONA	I 00338	616	A.422	B.337						
AUSTDALSBREEN	N 37323	321	A.121			C.29				
AUSTERDALSBREEN	N 31220	288	A.122	B.57						
AX010	NP 00005	906	A.547	B.448					D.8	
AZUFRADO E	CO 0005B	1525	A.24		BB.2					
AZUFRADO W	CO 0005A	1524	A.25		BB.3					
BABY GLACIER	CD 00205	1	A.1			C.1	CC.1			
BACHFALLEN F.	A 00304	500	A.293	B.208						
BAERENKOPF K.	A 00702	567	A.294	B.209						
BAKLIBREEN	N 31013	325	A.123							F
BALFOUR	NZ 882B1	1604	A.561	B.460						F
BALMACEDA	RC 00060	1657	A.39		BB.11					
BALTORO	PK 00006	991	A.542							F
BARBADORSO D.	I 00778	658	A.423	B.338						
BARLOW	NZ 893A2	1608	A.562	B.461						
BARTLEY	AN 00016	893	A.638	B.537						

GLACIER NAME	PSFG-NR	DATA BASE NR	DATA TABLE AND RECORD NUMBER				
BASEI	I 00064	611	A.424	B.339			
BASODINO	CH 00104	463	A.176	B.96			
BELLA TOLA	CH 00021	383	A.177	B.97			
BELVEDERE	I 00325	618	A.425	B.340			
BERGLAS F.	A 00308	496	A.295	B.210			
BERNARDO	RC 00037	1634	A.40	B.14	BB.12		
BESSANESE	I 00040	1297	A.426	B.341			
BEZENGI	SU 03006	703	A.510	B.420			
BIELTAL F.	A 0105A	481	A.296	B.211			
BIFERTEN	CH 00077	422	A.178	B.98			
BIRCH	CH 00354	1670	A.179				F
BIS	CH 00107	388	A.180	B.99			
BLAIR	NZ 711D1	1551	A.563	B.462			
BLANC	F 00031	351	A.166	B.87			
BLUE GLACIER	US 02126	210	A.9..	B.3			
BLUEMLISALP	CH 00064	436	A.181	B.100			
BOCKKOGEL F.	A 00302	502	A.297	B.212			
BODMER	CH 00355	1671	A.182				F
BOLSHOY AZAU	SU 03004	701	A.511	B.421			
BONAR	NZ 863A1	1587	A.564	B.463			
BOSSONS	F 00004	355	A.167	B.88			
BOVEYRE	CH 00041	459	A.183	B.101			
BREIDAMJOK.E.A	IS 1126A	271	A.71	B.17			
BREIDAMJOK.E.B	IS 1126B	270	A.72	B.18			
BREIDAMJOK.W.A	IS 1125A	258	A.73	B.19			
BREIDAMJOK.W.C	IS 1125C	272	A.74	B.20			
BRENEY	CH 00036	368	A.184	B.102			
BRENNKOGL K.	A 00727	528	A.298	B.213			
BRENVA	I 00219	615	A.427	B.342			
BRESCIANA	CH 00103	465	A.185	B.103			
BREWSTER	NZ 868C1	1597	A.565	B.464			
BROGGI	PE 00003	220	A.32	B.9			
BRIGSDALSBREEN	N 37110	314	A.124	B.58			
BROKARJOKULL	IS 01427	1322	A.75	B.21			
BRUARJOKULL	IS 02400	265	A.76			C.18	
BRUNEGG	CH 00020	384	A.186	B.104			
BRUNNI	CH 00072	427	A.187	B.105			
BUALTAR	PK 00004	987	A.543	B.446	BB.60		F
BURTON	NZ 888A1	1606	A.566	B.465			
CALDERAS	CH 00095	403	A.188	B.106			
CALVO	RC 00053	1650	A.41		BB.13		
CAMBRENA	CH 00099	399	A.189	B.107			
CAMERON	NZ 685B2	1565	A.567	B.466			
CANTWELL	US 00320	1669	A.10	B.4			

GLACIER NAME	PSFG-NR	DATA BASE NR	DATA TABLE AND RECORD NUMBER							
CARESER	I 00701	635	A.428			C.65		CCC.34		
CASPOGGIO	I 00435	628	A.429	B.343						
CAVAGNOLI	CH 00119	464	A.190	B.108						
CESAR	KN 00004	694	A.493	B.404	BB.39					
CEVEDALE	I 00732	662	A.430	B.344						
CHACALTAYA	RB 05180	1505	A.35	B.12		C.16				
CHAVANNES	I 00204	1257	A.431	B.345						
CHEILLON	CH 00029	375	A.191	B.109						
CIARDONEY	I 00081	1264	A.432	B.346		C.66				
CLARK CPI	AN 00012	894	A.639	B.538						
CLASSEN	NZ 711M1	1579	A.568	B.467						
COLIN CAMPBELL	NZ 693C1	1571	A.569	B.468						
COLLALTO	I 00927	647	A.433	B.347						
CORBASSIERE	CH 00038	366	A.192	B.110						
CORNO	CH 00120	468	A.193	B.111						
CRISTALLO	I 00937	644	A.434	B.348						
CRODA ROSSA	I 00828	654	A.435	B.349						
CROW	NZ 664C2	1564	A.570	B.469						
DAMMA	CH 00070	429	A.194	B.112						
DART	NZ 752C2	898	A.571	B.470						
DARWIN	KN 00006	696	A.494	B.405	BB.40					
DAUNKOGEL F.	A 0310A	604	A.299	B.214						
DEVON ICE CAP	CD0 0431	39	A.2			C.2	CC.2	CCC.1		
DIAMOND	KN 00010	692	A.495	B.406	BB.41					
DICKSON	RC 00063	1660	A.42		BB.14					
DIEM F.	A 00220	513	A.300	B.215						
DJANKUAT	SU 03010	726	A.512	B.422		C.72			D.4	
DONNE	NZ 851B2	1585	A.572	B.471						
DORFER K.	A 00509	577	A.301	B.216						
DOSDE OR.	I 00473	625	A.436	B.350						
DOSEGU	I 00512	668	A.437	B.351						
DOUGLAS (KAR.)	NZ 880B2	1601	A.573	B.472						
DOUGLAS (RAK.)	NZ 685B1	1543	A.574	B.473						
DX080	NP 00007	907	A.548	B.449						
DYNGJUJOKULL	IS 02600	1619	A.77			C.19				
DZHELO	SU 07106	1081	A.513	B.423	BB.52					
E.GRUEBL F.	A 00317	597	A.302	B.217						
EIGER	CH 00059	442	A.195	B.113						
EIGER (WEST)	CH 00353	475	A.196							F
EISKAR G.	A 01301	1632	A.303	B.218						
EN DARREY	CH 00030	374	A.197	B.114						
ENGABREEN	N 67011	298	A.125	B.59		C.30		CCC.9		
EUROPA	RC 00049	1646	A.43		BB.15					
EVANS	NZ 08972	1611	A.575	B.474						

GLACIER NAME	PSFG-NR	DATA BASE NR	DATA TABLE AND RECORD NUMBER						
EYJABAKKAJOKULL	IS 02300	266	A.78			C.20			
FAABERGSTOELSB.	N 31015	289	A.126	B.60					
FALLJOKULL	IS 01021	262	A.79	B.22					
FEE NORTH	CH 00013	392	A.198	B.115					
FELLARIA OCC.	I 00439	627	A.438	B.352					
FERNAU F.	A 00312	601	A.304	B.219					
FERPECLE	CH 00025	379	A.199	B.116					
FIESCHER	CH 00004	471	A.200	B.117					
FINDELEN	CH 00016	389	A.201	B.118					
FIRNALPELI	CH 00075	424	A.202	B.119					
FITZGERALD	NZ 880B3	1602	A.576	B.475					
FJALLS.FITJAR	IS 1024B	260	A.80	B.23					
FJALLSJ. BRMFJ	IS 1024A	261	A.81	B.24					
FJALLSJ.G-SEL	IS 1024C	259	A.82	B.25					
FLAAJOKULL	IS 1930A	1327	A.83	B.26					
FONTANA BIANCA	I 00713	1507	A.439			C.67			
FONTANA OCC.	I 00780	657	A.440	B.353					
FORCOLA	I 00731	663	A.441	B.354					
FOREL	KN 00011	691	A.496	B.407	BB.42				
FORNI	I 00507	670	A.442	B.355					
FORNO	CH 00102	396	A.203	B.120					
FOX	NZ 882A1	1536	A.577	B.476					
FRANZ JOSEF	NZ 888B2	899	A.578	B.477					
FREIGER F.	A 00320	595	A.305	B.220					
FREIWAND K.	A 00706	564	A.306	B.221					
FRIAS	RA 00064	1661	A.65		BB.37				
FROSNITZ K.	A 00507	579	A.307	B.222					
FRUSCHNITZ K.	A 00722	552	A.308	B.223					
FURTSCHAGL K.	A 00406	585	A.309	B.224					
GAISKAR F.	A 00325	530	A.310	B.225					
GAISSBERG F.	A 00225	508	A.311	B.226					
GAKONA	US 00215	1663	A.11						F
GAMCHI	CH 00061	440	A.204	B.121					
GARABASHI	SU 03031	761	A.514	B.424		C.73	CC.10	CCC.38	
GAULI	CH 00052	449	A.205	B.122					
GEBROULAZ	F 00009	352	A.168	B.89					
GEPATSCH F.	A 00202	522	A.312	B.227					
GIETRO	CH 00037	367	A.206	B.123					
GIGANTE CENTR.	I 00929	646	A.443	B.356					
GIGANTE OCC.	I 00930	645	A.444	B.357					
GIGJOKULL	IS 00112	245	A.84	B.27					F
GLAERNISCH	CH 00080	418	A.207	B.124					
GLENMARY	NZ 711F1	1550	A.579	B.478					
GLJUFURARJOKULL	IS 00103	282	A.85	B.28					

GLACIER NAME	PSFG-NR	DATA BASE NR	DATA TABLE AND RECORD NUMBER							
GODLEY	NZ 711M3	1581	A.580	B.479						
GOESSNITZ K.	A 01201	532	A.313	B.228						
GOLETTA	I 00148	683	A.445	B.358						
GOLUBIN	SU 05060	753	A.515			C.74				
GORNER	CH 00014	391	A.208	B.125						
GR GOLDBERG KEE	A 0802B	1305	A.314	B.229						
GR.GOSAU G.	A 01101	536	A.315	B.230						
GRAASUBREEN	N 00547	299	A.127			C.31		CCC.10		
GRAN PILASTRO	I 00893	652	A.446	B.359						
GRAND DESERT	CH 00031	373	A.209	B.126						
GRAND PLAN NEVE	CH 00045	455	A.210	B.127						
GREGORY	KN 00009	693	A.497	B.408	BB.43					
GREVE	RC 00040	1637	A.44		BB.16					
GREY	RC 00062	1659	A.45	B.15	BB.17					
GREY AND MAUD	NZ 711M2	1580	A.581	B.480						F
GRIES (AEGINA)	CH 00003	359	A.211	B.128		C.54	CC.7	CCC.25		F
GRIESS(KLAUSEN)	CH 00074	425	A.212	B.129						
GRIESSEN(OBWA.)	CH 00076	423	A.213	B.130						
GROSSELEND K.	A 01001	542	A.316	B.231						
GROSSER ALETSCH	CH 00005	360	A.214	B.131		C.55				F
GRUBEN	CH 00352	460	A.215							F
GRUENAU F.	A 00315	599	A.317	B.232						
GULKANA	US 00200	90	A.12			C.7				
GURGLER F.	A 00222	511	A.318	B.233						
GUSLAR F.	A 00210	490	A.319	B.234						
GYAJO	NP 00011	1069	A.549	B.450						
HABACH KEES	A 00504	1310	A.320	B.235						
HAGAFELLSJOK.E	IS 00306	255	A.86	B.29						
HAGAFELLSJOK.W	IS 00204	275	A.87	B.30						
HALLSTAETTER G.	A 01102	535	A.321	B.236						
HALSJOKULL	IS 00117	1622	A.88	B.31						
HAMAGURI YUKI	J 00001	897	A.555			C.88				
HANS TAUSEN IC.	G 00015	1618	A.66							F
HANSBREEN	N 12419	306	A.128	B.61		C.32				
HANSEBREEN	N 36206	322	A.129			C.33		CCC.12		
HARDANGERJOEKUL	N 22303	304	A.130			C.34		CCC.13		
HART	AN 00019	889	A.640	B.539						
HEIM	KN 00012	690	A.498	B.409	BB.44					
HEIMDALL	AN 00003	890	A.641	B.540						
HELLSTUGUBREEN	N 00511	300	A.131	B.62		C.35				
HELM	CD 00855	45	A.3..			C.3				
HINTEREIS F.	A 00209	491	A.322	B.237		C.57		CCC.27	D.3	
HOCHALM K.	A 01005	538	A.323	B.238						
HOCHJOCH F.	A 00208	492	A.324	B.239						

GLACIER NAME	PSFG-NR	DATA BASE NR	DATA TABLE AND RECORD NUMBER					
HOCHMOOS F.	A 00309	495	A.325	B.240				
HOFFELLSJ.W	IS 02031	269	A.89	B.32				
HOFMANNS K.	A 00724	550	A.326	B.241				
HOFSJOKULL E	IS 0510B	1467	A.90			C.21		
HOFSJOKULL N	IS 0510A	284	A.91			C.22		
HOFSJOKULL SW	IS 0510C	1468	A.92			C.23		
HOOKER	NZ 711H2	1576	A.582	B.481				
HORACE WALKER	NZ 880B1	1600	A.583	B.482				
HORN K.(SCHOB.)	A 01202	531	A.327	B.242				
HORN K.(ZILLER)	A 00402	589	A.328	B.243				
HOSAND SETT.	I 00357	631	A.447	B.360				
HPS12	RC 00043	1640	A.46		BB.18			
HPS13	RC 00045	1642	A.47		BB.19			
HPS15	RC 00046	1643	A.48		BB.20			
HPS19	RC 00047	1644	A.49		BB.21			
HPS28	RC 00051	1648	A.50		BB.22			
HPS29	RC 00052	1649	A.51		BB.23			
HPS31	RC 00050	1647	A.52		BB.24			
HPS34	RC 00054	1651	A.53		BB.25			
HPS38	RC 00057	1654	A.54		BB.26			
HPS41	RC 00058	1655	A.55		BB.27			
HPS8	RC 00041	1638	A.56		BB.28			
HPS9	RC 00042	1639	A.57		BB.29			
HRUTARJOKULL	IS 00923	263	A.93	B.33				
HUEFI	CH 00073	426	A.216	B.132				
HYLLGLACIAEREN	S 00780	344	A.145	B.68	BB.38			
HYRNINGSJOKULL	IS 00100	283	A.94	B.34				
INN.PIRCHLKAR	A 00228	505	A.329	B.244				
ISFALLSGLAC.	S 00787	333	A.146	B.69				
IVORY	NZ 09011	900	A.584	B.483				
JACK	NZ 08751	1553	A.585	B.484				
JACKSON	NZ 868B5	1552	A.586	B.485				
JALF	NZ 08861	1549	A.587	B.486				
JAMTAL F.	A 00106	480	A.330	B.245		C.58	CCC.28	
JOKULKROKUR	IS 00007	242	A.95	B.35				
JOSEPH	KN 00003	689	A.499	B.410	BB.45			
KA.TAUERN K.S	A 0602B	571	A.331	B.246				
KAELBERSPITZ K.	A 01003	540	A.332	B.247				
KAHUTEA	NZ 685E1	1569	A.588	B.487				
KALDALONSJOKULL	IS 00102	244	A.96	B.36				F
KALTWASSER	CH 00007	363	A.217	B.133				F
KARA-BATKAK	SU 05080	813	A.516	B.425		C.75		
KARAMBAR	PK 00028	1002	A.544	B.447				F
KARLES F.	A 00207	493	A.333	B.248				

GLACIER NAME	PSFG-NR	DATA BASE NR	DATA TABLE AND RECORD NUMBER						
KARLINGER K.	A 00701	568	A.334	B.249					
KARSOJIETNA	S 00798	330	A.147	B.70		C.46			
KEA	NZ 08971	1545	A.589	B.488					
KEHLEN	CH 00068	431	A.218	B.134					
KESSELWAND F.	A 00226	507	A.335	B.250		C.59			
KESSJEN	CH 00012	393	A.219	B.135					
KHAKEL	SU 03003	700	A.517	B.426					
KL.FLEISS K.	A 00801	547	A.336	B.251					
KLEINEISER K.	A 00717	555	A.337	B.252					
KLEINELEND K.	A 01002	541	A.338	B.253					
KLOSTERTALER M.	A 0102B	485	A.339	B.254					
KLOSTERTALER N.	A 0102A	486	A.340	B.255					
KLOSTERTALER S.	A 0102C	484	A.341	B.256					
KOELDUKVISLARJ.	IS 02700	1621	A.97			C.24			
KONGMA	NP 00010	909	A.550	B.451					
KONGMA TIKPE	NP 00009	908	A.551	B.452					
KONGSVEGEN	N 15510	1456	A.132			C.36			
KORUMDU	SU 07103	793	A.518	B.427					
KOZELSKIY	SU 08005	790	A.519	B.428		C.76	CCC.39		
KRAPF	KN 00001	688	A.500	B.411	BB.46				
KRIMMLER K. EAST	A 0501B	1309	A.342	B.257					
KRIMMLER K.	A 0501A	584	A.343	B.258					
KRUML K.	A 00806	527	A.344	B.259					
KVERKJOKULL	IS 02500	248	A.98	B.37					
KVIARJOKULL	IS 00822	264	A.99	B.38					
LA CABANA	CO 00007	1527	A.26		BB.4				
LA MARE	I 00699	636	A.448	B.361					
LA PEROUSE	NZ 882B2	1605	A.590	B.489					
LA PLAZUELA	CO 00006	1526	A.27		BB.5				
LAEMMERN	CH 00063	437	A.220	B.136					
LAENGENTALER F.	A 00305	499	A.345	B.260					
LAGUNILLAS	CO 00008	1528	A.28		BB.6				F
LAMBERT	NZ 08973	1612	A.591	B.490					
LANA	I 00913	650	A.449	B.362					
LANDECK K.	A 00604	569	A.346	B.261					
LANG	CH 00018	386	A.221	B.137					
LANGFJORDJOEKUL	N 85008	323	A.133			C.37		CCC.15	
LANGTALER F.	A 00223	510	A.347	B.262					
LAPERWITZ K.	A 00721	553	A.348	B.263					
LARAIN F.	A 00107	479	A.349	B.264					
LAVAZ	CH 00082	416	A.222	B.138					
LE BLANC	NZ 868B3	1595	A.592	B.491					
LEIRBREEN	N 00548	301	A.134	B.63					
LEIRUFJ.JOKULL	IS 00200	277	A.100	B.39					F

GLACIER NAME	PSFG-NR	DATA BASE NR	DATA TABLE AND RECORD NUMBER						
LENTA	CH 00084	414	A.223	B.139					
LEONERA ALTA	CO 00009	1529	A.29		BB.7				
LEVIY AKTRU	SU 07102	794	A.520	B.429		C.77	CCC.40		
LEVIY KARAGEMSK	SU 07107	1084	A.521	B.430	BB.53				
LEWIS	KN 00008	695	A.501	B.412	BB.47	C.70	CCC.35		
LEX BLANCHE	I 00209	682	A.450	B.363					
LIESENSER F.	A 00306	498	A.350	B.265					
LIMMERN	CH 00078	421	A.224	B.140					
LINDSAY	NZ 08671	1556	A.593	B.492					
LISCHANA	CH 00098	400	A.225	B.141					
LITZNERGL.	A 00101	607	A.351	B.266					
LUNGA(VEDRETTA)	I 00733	661	A.451	B.364					
LYELL	NZ 685C2	1567	A.594	B.493					
LYS	I 00304	620	A.452	B.365					
M. NEVOSO OCC.	I 0931X	679	A.453	B.366					
M.LOVENBREEN	N 15506	291	A.135			C.38			
MALADETA	E 09020	942	A.492			C.69			
MALAVALLE	I 00875	672	A.454	B.367					
MALIY AKTRU	SU 07100	795	A.522	B.431		C.78			
MALIY AZAU	SU 03032	762	A.523	B.432					
MANDRONE	I 00639	664	A.455	B.368					
MARCHANT	NZ 880A1	1598	A.595	B.494					
MARION	NZ 863B4	1591	A.596	B.495					
MARMADUKE DIXON	NZ 664C1	1541	A.597	B.496					F
MARMAGLACIAEREN	S 00799	1461	A.148			C.47	CC.5		
MARMOLADA	I 00941	676	A.456	B.369					
MARTINETS	CH 00046	358	A.226	B.142					
MARZELL F.	A 00218	515	A.352	B.267					
MAURER K.(GLO.)	A 00714	558	A.353	B.268					
MAURER K.(VEN.)	A 00510	576	A.354	B.269					
MC COY	NZ 693C2	1572	A.598	B.497					
MCCALL	US 00001	1388	A.13	B.5		C.8		D.1	
MELHUISH	KN 00014	1066	A.502		BB.48				
MER DE GLACE	F 00003	353	A.169	B.90					
MESERVE MPII	AN 00017	892	A.642	B.541					
MIDDLE TOKLAT	US 00315	1668	A.14	B.6					
MIEGUSZOWIECKIE	PL 00140	903	A.505	B.415					
MIKKAJEKNA	S 00766	338	A.149	B.71					
MITTELALETSCH	CH 00106	470	A.227	B.143					
MITTELBERG F.	A 00206	494	A.355	B.270					
MITTERKAR F.	A 00214	487	A.356	B.271					
MITTIVAKKAT	G 00019	1629	A.67						F
MIZHIRGICHIRAN	SU 03043	1509	A.524	B.433	BB.54				
MOIRY	CH 00024	380	A.228	B.144					

GLACIER NAME	PSFG-NR	DATA BASE NR	DATA TABLE AND RECORD NUMBER							
MOMING	CH 00023	381	A.229	B.145						
MONCORVE	I 00131	1236	A.457	B.370						
MONT DURAND	CH 00035	369	A.230	B.146						
MONT FORT	CH 00032	372	A.231	B.147						
MONT MINE	CH 00026	378	A.232	B.148						
MORSARJOKULL	IS 00318	252	A.101	B.40						
MORTERATSCH	CH 00094	1673	A.233	B.149						
MUELLER	NZ 711H1	1575	A.599	B.498						
MULAJOKULL S.	IS 0311A	253	A.102	B.41						F
MULINET NORD	I 00048	1300	A.458							F
MURAVLEV	SU 06002	796	A.525	B.434	BB.55			CCC.42	D.5	
MURCHISON	NZ 711J1	1578	A.600	B.499						
MUTMAL F.	A 00227	506	A.357	B.272						
MUTT	CH 00002	472	A.234	B.150						
NARDIS OCC.	I 00640	639	A.459	B.371						
NAUTHAGAJOKULL	IS 00210	274	A.103	B.42						
NEREIDAS	CO 00014	1513	A.30	B.8	BB.8					
NEVES OR.	I 00902	651	A.460	B.372						
NIEDERJOCH F.	A 00217	516	A.358	B.273						
NIGARDSBREEN	N 31014	290	A.136	B.64		C.39		CCC.16		
NIOGHALVFJERDSF	G 00017	1627	A.68							F
NISCLI	I 00633	677	A.461	B.373						
NO.122 (UNIV.)	SU 07108	1508	A.526	B.435	BB.56					
NO.125 (VODOP.)	SU 07105	780	A.527	B.436		C.79				
NO.131	SU 05081	782	A.528			C.80				
NO.462V(KUL.N.)	SU 03005	702	A.529	B.437						
NOISY CREEK	US 02078	1666	A.15			C.9				
NORTH KLAWATTI	US 02076	1664	A.16			C.10				
NORTHEY	KN 00013	698	A.503	B.413	BB.49					
OB.GRINDELWALD	CH 00057	444	A.235	B.151						
OBERAAR	CH 00050	451	A.236	B.152						
OBERSULZBACH K.	A 00502	583	A.359	B.274						
OCCIDENTAL	RC 00039	1636	A.58		BB.30					
OCHSENTALERGL.	A 00103	483	A.360	B.275		C.60		CCC.30		
OEDENWINKEL K.	A 00712	559	A.361	B.276						
OFENTAL	CH 00009	469	A.237	B.153						
OFHIDRO	RC 00036	1633	A.59		BB.31					
OKSTINDBREEN	N 64902	324	A.137			C.40				
OLDUFELLSJOKULL	IS 00114	246	A.104	B.43						F
OTEMMA	CH 00034	370	A.238	B.154						
OVERLORD	CD 01590	43	A.4..	B.1						
PALUE	CH 00100	398	A.239	B.155						
PANEYROSSE	CH 00044	456	A.240	B.156						
PANMAH	PK 00007	1000	A.545							F

GLACIER NAME	PSFG-NR	DATA BASE NR	DATA TABLE AND RECORD NUMBER					
PARADIES	CH 00086	412	A.241	B.157				
PARADISINO	CH 00101	397	A.242	B.158				
PARK PASS 1	NZ 752B1	1559	A.601	B.500				
PARTEJEKNA	S 00763	327	A.150	B.72				
PASSUSJIETNA E.	S 00797	331	A.151	B.73				
PASSUSJIETNA W	S 00796	345	A.152	B.74				
PASTERZEN K.	A 00704	566	A.362	B.277				
PENDENTE	I 00876	675	A.462	B.374				
PENGUIN	RC 00048	1645	A.60		BB.32			
PEYTO	CD 01640	57	A.5..			C.4	CCC.2	
PFAFFEN F.	A 00324	591	A.363	B.278				
PFANDLSCHARTEN	A 00707	563	A.364	B.279				
PIERREDAR	CH 00049	452	A.243	B.159				
PINGO	RC 00061	1658	A.61		BB.33			
PIO XI	RC 00044	1641	A.62	B.16	BB.34			
PIODE	I 00312	619	A.463	B.375				
PISGANA OCC.	I 00577	666	A.464	B.376				
PIZOL	CH 00081	417	A.244	B.160				
PIZZO SCALINO	I 00443	1187	A.465	B.377				
PLACE	CD 01660	41	A.6..			C.5	CCC.3	
PLATTALVA	CH 00114	420	A.245	B.161				
POD BULA	PL 00111	1617	A.506	B.416	BB.51			
POD CUBRYNA	PL 00180	902	A.507	B.417				
POET	NZ 868B2	1594	A.602	B.501				
PORCHABELLA	CH 00088	410	A.246	B.162				
PRAEGRAT K.	A 00603	570	A.365	B.280				
PRAPIO	CH 00048	453	A.247	B.163				
PRAVIY KARAGEMS	SU 07109	1085	A.530	B.438	BB.57			
PRE DE BAR	I 00235	681	A.466	B.378				
PRESANELLA	I 00678	637	A.467	B.379				
PUNTEGLIAS	CH 00083	415	A.248	B.164				
QUAIRA BIANCA	I 00889	686	A.468	B.380				
RABOTS GLACIAER	S 00785	334	A.153	B.75		C.48	CCC.23	
RAETZLI	CH 00065	434	A.249	B.165				
RAMSAY	NZ 685C3	1568	A.603	B.502				
REISCHEK	NZ 685C1	1566	A.604	B.503				
RETREAT	NZ 906A1	1542	A.605	B.504				
RETTENBACH F.	A 00212	488	A.366	B.281				
REYKJAFJARDARJ.	IS 00300	273	A.105	B.44				F
RHONE	CH 00001	473	A.250	B.166				
RICHARDSON	NZ 711E1	1574	A.606	B.505				
RIDGE	NZ 711L1	1547	A.607	B.506				
RIED	CH 00017	387	A.251	B.167				
RIFFL K. N	A 00718	554	A.367	B.282				

GLACIER NAME	PSFG-NR	DATA BASE NR	DATA TABLE AND RECORD NUMBER				
RIFFLKAR KEES	A 0713A	606	A.368	B.283			
RIKHA SAMBA	NP 00012	1516	A.552	B.453			
RIUKOJIETNA	S 00790	342	A.154	B.76	C.49		
ROFENKAR F.	A 00215	518	A.369	B.284			
ROLLESTON	NZ 911A2	1538	A.608	B.507			
ROSEG	CH 00092	406	A.252	B.168			
ROSENLAUI	CH 00056	445	A.253	B.169			
ROSIM	I 00754	610	A.469	B.381			
ROSSA (VEDR.)	I 00697	674	A.470	B.382			
ROSSBODEN	CH 00105	462	A.254	B.170			
ROSSO DESTRO	I 00920	648	A.471	B.383			
ROTFIRN NORD	CH 00069	430	A.255	B.171			
ROTMOOS F.	A 00224	509	A.370	B.285			
RUOPSOKJEKNA	S 00764	340	A.155	B.77			
RUOTESJEKNA	S 00767	337	A.156	B.78			
RUTOR	I 00189	612	A.472	B.384			
SAINT SORLIN	F 00015	356	A.170	B.91	C.52	CC.6	
SALAJEKNA	S 00759	341	A.157	B.79			
SALE	NZ 906B1	1614	A.609	B.508			
SALEINA	CH 00042	458	A.256	B.172			
SANDALEE	US 02079	1667	A.17		C.11		
SANKT ANNA	CH 00067	432	A.257	B.173			
SARDONA	CH 00091	407	A.258	B.174			
SARENNES	F 00029	357	A.171		C.53		
SARPO LAGGO	PK 1002	1631	A.546				F
SASSOLUNGO OCC.	I 00926	678	A.473	B.385			
SATUJOKULL	IS 00530	1623	A.106	B.45			
SCHALF F.	A 00219	514	A.371	B.286			
SCHATTENSPITZ	A 00108	526	A.372	B.287			
SCHAUFEL F.	A 00311	602	A.373	B.288			
SCHLADMINGER G.	A 01103	534	A.374	B.289			
SCHLAPPEREBEN K	A 00805	544	A.375	B.290			
SCHLATEN K.	A 00506	580	A.376	B.291			
SCHLEGEIS K.	A 00405	586	A.377	B.292			
SCHMIEDINGER K.	A 00726	548	A.378	B.293			
SCHNEEGLOCKEN	A 00109	525	A.379	B.294			
SCHNEELOCH G.	A 01104	533	A.380	B.295			
SCHWARZ	CH 00062	438	A.259	B.175			
SCHWARZBERG	CH 00010	395	A.260	B.176			
SCHWARZENBERG F	A 00303	501	A.381	B.296			
SCHWARZENSTEIN	A 00403	588	A.382	B.297			
SCHWARZKARL K.	A 00716	556	A.383	B.298			
SCHWARZKOEPFL K	A 00710	560	A.384	B.299			
SE KASKASATJ GL	S 00789	329	A.158	B.80			

GLACIER NAME	PSFG-NR	DATA BASE NR	DATA TABLE AND RECORD NUMBER							
SERANA (VEDR.)	I 00728	634	A.474	B.386						
SESVENNA	CH 00097	401	A.261	B.177						
SEX ROUGE	CH 00047	454	A.262	B.178						
SEXEGERTEN F.	A 00204	520	A.385	B.300						
SFORZELLINA	I 00516	667	A.475	B.387		C.68				
SHUMSKIY	SU 06001	797	A.531	B.439	BB.58	C.81	CC.11		D.6	
SIDUJOK.E M177	IS 0015B	243	A.107	B.46						F
SIEGE	NZ 893A1	1616	A.610	B.509						
SILVER	US 02077	1665	A.18			C.12				
SILVRETTA	CH 00090	408	A.263	B.179		C.56	CC.8			
SIMMING F.	A 00318	596	A.386	B.301						
SIMONY K.	A 00511	575	A.387	B.302						
SINCLAIR	NZ 693C3	1573	A.611	B.510						
SIRWOLTE	CH 00356	1672	A.264							F
SKAFTAFELLSJ.	IS 00419	251	A.108	B.47						
SKALAFELLSJOKUL	IS 1728A	1325	A.109	B.48						
SKEIDARARJ. E1	IS 0117A	280	A.110	B.49						F
SKEIDARARJ. E2	IS 0117B	279	A.111	B.50						F
SKEIDARARJ. E3	IS 0117C	278	A.112	B.51						F
SKEIDARARJ. W	IS 00116	281	A.113	B.52						F
SNOW WHITE	NZ 863B2	1588	A.612	B.511						
SNOWBALL	NZ 863B3	1589	A.613	B.512						
SNOWY	RC 00059	1656	A.63		BB.35					
SOLDA	I 00762	660	A.476	B.388						
SOLHEIMAJOK. W	IS 0113A	247	A.114	B.53						
SONNBLICK K.	A 0601A	573	A.388	B.303		C.61				
SOUTH CASCADE	US 02013	205	A.19	B.7		C.13				
SPENCER	NZ 888A2	1607	A.614	B.513						
SPIEGEL F.	A 00221	512	A.389	B.304						
SPOERTEGGBREEN	N 31027	319	A.138			C.41		CCC.18		
STEGHOLTBREEN	N 31021	313	A.139	B.65						
STEIN	CH 00053	448	A.265	B.180						
STEINLIMMI	CH 00054	447	A.266	B.181						
STORBREEN	N 00541	302	A.140	B.66		C.42		CCC.19		
STORGLACIAEREN	S 00788	332	A.159	B.81		C.50		CCC.24		
STORSTEINSFJELL	N 07381	1329	A.141			C.43		CCC.20		
STORSTROEMMEN	G 00018	1628	A.69							F
STOUR RAEITAGL.	S 00784	335	A.160	B.82						
STRAUCHON	NZ 880A2	1599	A.615	B.514						
STYGGEDALSBREEN	N 30720	303	A.142	B.67						
SULZ	CH 00079	419	A.267	B.182						
SULZENAU F.	A 0314A	600	A.390	B.305						
SULZTAL F.	A 00301	503	A.391	B.306						
SUOTTASJEKNA	S 00768	336	A.161	B.83						

GLACIER NAME	PSFG-NR	DATA BASE NR	DATA TABLE AND RECORD NUMBER					
SURETTA	CH 00087	411	A.268	B.183				
SUYOK ZAPADNIY	SU 05082	781	A.532			C.82		
SVARTISHEIBREEN	N 65509	320	A.143			C.44	CCC.21	
SVINAFELLSJ.	IS 0520A	250	A.115	B.54				
TAELLIBODEN	CH 00008	362	A.269	B.184				
TARFALAGL	S 00791	326	A.162			C.51		
TASCHACH F.	A 00205	519	A.392	B.307				
TASMAN	NZ 711I1	1074	A.616	B.515				F
TAUFKAR F.	A 00216	517	A.393	B.308				
TEISCHNITZ K.	A 00723	551	A.394	B.309				
TEMPANO	RC 00038	1635	A.64		BB.36			
TESSA	I 00829	653	A.477	B.389				
THERMA	NZ 08641	1592	A.617	B.516				
THRANDARJOKULL	IS 01940	1620	A.116			C.25		
THULAGI	NP 00013	1535	A.553		BB.61			F
THURNEYSON	NZ 711B1	1554	A.618	B.517				
TIATSCHA	CH 00096	402	A.270	B.185				
TIEFEN	CH 00066	433	A.271	B.186				
TORNADO	NZ 863C2	1586	A.619	B.518				
TOTENFELD	A 00110	524	A.395	B.310				
TOULES	I 00221	614	A.478	B.390				
TRAVIGNOLO	I 00947	1514	A.479	B.391				
TRESERO	I 00511	669	A.480	B.392				
TRIEBENKARLAS F	A 00323	592	A.396	B.311				
TRIENT	CH 00043	457	A.272	B.187				
TRIFT (GADMEN)	CH 00055	446	A.273	B.188				
TROLLBERGDALSBR	N 68507	316	A.144			C.45	CCC.22	
TS.TUYUKSUYSKIY	SU 05075	817	A.533	B.440		C.83		
TSANFLEURON	CH 00033	371	A.274	B.189				
TSCHIERVA	CH 00093	405	A.275	B.190				
TSCHINGEL	CH 00060	441	A.276	B.191				
TSEUDET	CH 00040	364	A.277	B.192				
TSEYA	SU 03007	704	A.534	B.441				
TSIDJIORE NOUVE	CH 00028	376	A.278	B.193				
TUNGNAARJOKULL	IS 02214	267	A.117	B.55		C.26		F
TURTMANN (WEST)	CH 00019	385	A.279	B.194				
TYNDALL	KN 00005	697	A.504	B.414	BB.50			
TZA DE TZAN	I 00259	623	A.481	B.393				
UEBERGOSS.ALM	A 00901	543	A.397	B.312				
ULTIMA (VEDR.)	I 00729	633	A.482	B.394				
UMBAL K.	A 00512	574	A.398	B.313				
UNNA RAEITA GL.	S 00783	343	A.163	B.84				
UNNAMED G16	G 00016	1662	A.70					F
UNNAMED NZ664C	NZ 664C1	1539	A.620	B.519				

GLACIER NAME	PSFG-NR	DATA BASE NR	DATA TABLE AND RECORD NUMBER					
UNNAMED NZ685C	NZ 685C4	1544	A.621	B.520				
UNNAMED NZ685F	NZ 685F1	1540	A.622	B.521				
UNNAMED NZ752E	NZ 752E1	1557	A.623	B.522				
UNNAMED NZ752I	NZ 752I1	1555	A.624	B.523				
UNNAMED NZ797G	NZ 797G1	1562	A.625	B.524				
UNNAMED NZ846	NZ 08461	1561	A.626	B.525				
UNNAMED NZ851B	NZ 851B1	1560	A.627	B.526				
UNNAMED NZ863B	NZ 863B1	1558	A.628	B.527				
UNNAMED NZ868B	NZ 868B4	1596	A.629	B.528				
UNNAMED NZ911A	NZ 911A1	1537	A.630	B.529				
UNT. RIFFL KEES	A 0713B	605	A.399	B.314				
UNT.GRINDELWALD	CH 00058	443	A.280	B.195				
UNTERAAR	CH 00051	450	A.281	B.196				
UNTERSULZBACH K	A 00503	582	A.400	B.315				
URUASHRAJU	PE 00005	221	A.33	B.10				
URUMQIHE E-BR.	CN 00010	1511	A.537		C.84	CC.12	CCC.43	
URUMQIHE S.NO.1	CN 00010	853	A.538	B.444	C.85			
URUMQIHE W-BR.	CN 00010	1512	A.539		C.86	CC.13	CCC.44	
VAL TORTA	CH 00118	466	A.282	B.197				
VALLE DEL VENTO	I 00919	649	A.483	B.395				
VALLEGGIA	CH 00117	467	A.283	B.198				
VALLELUNGA	I 00777	659	A.484	B.396				
VALSOREY	CH 00039	365	A.284	B.199				
VALTOURNENCHE	I 00289	621	A.485	B.397				
VARIEGATED	US 01302	150	A.20					F
VARTASJEKNA	S 00765	339	A.164	B.85				
VD.KASTEN K.	A 00719	478	A.401	B.316				
VENEROCOLO	I 00581	665	A.486	B.398				
VENEZIA (VEDR.)	I 00698	673	A.487	B.399				
VENTINA	I 00416	629	A.488	B.400				
VENTORILLO	MX 00101	914	A.22					F
VERBORGENBERG F	A 00322	593	A.402	B.317				
VERMUNTGL.	A 00104	482	A.403	B.318	C.62		CCC.31	
VERNAGT F.	A 00211	489	A.404	B.319	C.63		CCC.32	F
VERSTANKLA	CH 00089	409	A.285	B.200				
VICTORIA	NZ 882A1	1603	A.631	B.530				
VICTORIA UPPER	AN 00013	879	A.643	B.542				
VILTRAGEN K.	A 00505	581	A.405	B.320				
VIRKISJOKULL	IS 00721	249	A.118	B.56				
VITELLI	I 00483	671	A.489	B.401				
VORAB	CH 00085	413	A.286	B.201				
W.TRIPP K.	A 01004	539	A.406	B.321				
WALLENBUR	CH 00071	428	A.287	B.202				
WASSERFALLWINKL	A 00705	565	A.407	B.322				

GLACIER NAME	PSFG-NR	DATA BASE NR	DATA TABLE AND RECORD NUMBER					
WAXEGG K.	A 00401	590	A.408	B.323				
WEDGEMOUNT	CD 02333	42	A.7	B.2				F
WEISSEE F.	A 00201	523	A.409	B.324				
WHITBOURNE	NZ 752C1	1583	A.632	B.531				
WHITE	CD 02340	0	A.8		C.6	CC.3	CCC.4	
WHITE	NZ 664C1	1563	A.633	B.532				
WHYMPER	NZ 893B1	1609	A.634	B.533				
WIELINGER K.	A 00725	549	A.410	B.325				
WIGLEY	NZ 873B2	1610	A.635	B.534				
WILDGERLOS	A 00404	587	A.411	B.326				
WILKINSON	NZ 906B2	1615	A.636	B.535				
WINKL K.	A 01006	537	A.412	B.327				
WOLVERINE	US 00411	94	A.21		C.14			
WRIGHT LOWER	AN 00018	891	A.644	B.543				
WRIGHT UPPER B	AN 00011	895	A.645	B.544				
WURFER K.	A 00715	557	A.413	B.328				
WURTEN K.	A 00804	545	A.414	B.329	C.64	CC.9		
XIAO DONGKZMADI	CN 00038	1510	A.540		C.87	CC.14		
YALA	NP 00004	912	A.554	B.454				
YANAMAREY	PE 00004	226	A.34	B.11				
YUGO-VOSTOCHNIY	SU 03018	778	A.535	B.442				
YUZHNIY	SU 03017	779	A.536	B.443				
ZAI DI DENTRO	I 00749	1515	A.490	B.402				
ZAI DI MEZZO	I 00750	1127	A.491	B.403				
ZETTALUNITZ K.	A 00508	578	A.415	B.330				
ZINAL	CH 00022	382	A.288	B.203				
ZMUTT	CH 00015	390	A.289	B.204				
ZONGO	RB 05150	1503	A.36	B.13	C.17			
ZORA	NZ 868B1	1593	A.637	B.536				