Bulletin No. 3 (2016–2017)

Global Glacier Change Bulletin

A contribution to

the Global Terrestrial Network for Glaciers (GTN-G) as part of the Global Climate Observing System (GCOS) and its Terrestrial Observation Panel for Climate (TOPC),

the Science Division and the Global Environment Outlook as part of the United Nations Environment Programme (Science Division and GEO, UNEP),

and the International Hydrological Programme of the United Nations Educational, Scientific and Cultural Organization (IHP, UNESCO)

Compiled by
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ISC (WDS) – IUGG (IACS) – UNEP – UNESCO – WMO | 2020

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Edited by

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Cover page

Aerial view of Bahía del Diablo, Antarctic Peninsula, in January 2016 (photo taken by S. Marinsek).

Preface by GCOS

In the years 2016 and 2017 covered by this bulletin, the climate set unprecedented records. The year 2016 was the warmest on record, while 2017 was the warmest year without an El Niño event. This global heating not only affects temperatures, it also causes increasingly adverse effects on human livelihoods with regard to freshwater availability, agriculture, health, and the impacts of climate extremes. As a tool for mitigating the negative repercussions and to help adapt, predictions and projections of the climate are of crucial importance. However, science shows that the global climate system becomes increasingly unpredictable and the likelihood of fundamental changes occurring in system behavior, the so-called tipping points, are becoming more and more likely. Under these circumstances, detailed and timely information on the state of the climate is more important than ever. These issues are addressed by the Global Climate Observing System (GCOS), a system of observing networks which monitor the state of the global climate. In this system of systems, glaciers – monitored by the WGMS – play a central role. Over the last decades, the WGMS has fulfilled this role in a sustained and exemplary manner.

In addition, the WGMS has become a role model for communicating and promoting climate data and its relevance: For the GCOS/WMO Climate Indicators (https://gcos.wmo.int/en/global-climate-indicators), which are reported annually to the parties of the United Nations Framework Convention on Climate Change (UNFCCC) in the WMO Statement of the Climate, the WGMS is the sole source of global glacier data. The WGMS has also become a key partner in the Copernicus Climate Change Service (C3S) and its European State of the Climate Report (https://climate.copernicus.eu/). A further source of vital information is the recently published Worldwide Assessment of National Glacier Monitoring (Gärtner-Roer et al., 2019), which sets standards for other networks with regard to climate data dissemination and transparency of analysis.

Even more outstanding is the WGMS involvement in the global protection of our glaciers and climate as witnessed by its Letter of Concern to the UNFCCC and its Conference of Parties last year in Madrid (COP25). The WGMS has become more than a network of glacier data providers; it has broadened its partnership to include joint responsibility for the object of its observations, namely the glaciers. GCOS welcomes and supports this engagement, and hopes that other networks will follow this excellent example. Thus, we are proud to have the WGMS as a partner and we look forward to continuing our fruitful and excellent collaboration.

Carolin Richter, Dr
Director, GCOS Secretariat

Preface by IACS (IUGG)

The International Association of Cryospheric Sciences (IACS) was established in 2007 as the eighth Association under the International Union of Geodesy and Geophysics (IUGG). Glacier monitoring is an important activity of IACS which extends back to the Commission Internationale des Glaciers (CIG), the common origin of both IACS and the WGMS. Nowadays the IACS chairs the Advisory Board for the Global Terrestrial Network for Glaciers (GTN-G), where the WGMS has taken on a leading role. In 2019, the WGMS celebrated the 125-year jubilee of internationally coordinated glacier monitoring, jointly with IACS, during the IUGG General Assembly in Montreal, Canada, and with its National Correspondents during the WGMS General Assembly.

Since 1986, the WGMS has collected and published standardized information relating to ongoing glacier fluctuations and events, including changes in glacier length, area, volume and mass. In response to calls-for-data, observations are contributed through an international network of scientific collaboration, which consists of WGMS National Correspondents and Principal Investigators in over 40 countries worldwide. Submitted data are converted into standardized formats and uploaded into the Fluctuations of Glaciers database. Each version of the database is given a digital object identifier (doi) and made available to the public. The WGMS data-sets have been cited regularly in assessment reports by the Intergovernmental Panel on Climate Change (IPCC). WGMS data are expected to continue to be used widely in scientific studies and publications. A recent evaluation of WGMS through the Global Terrestrial Network for Glaciers (GTN-G) highlighted the pivotal role WGMS plays in local, regional and global-scale glacier studies.

The present bulletin presents a wealth of data from numerous glaciers around the world. The data collected either in situ or via remote sensing are the result of much hard work and joint effort by members of the glaciological community. The IACS is very appreciative of the work of all the investigators and National Correspondents who have collected, analyzed and submitted their data to the WGMS database to be shared with the international community and would also like to express its gratitude to the WGMS for its thorough and ongoing efforts to assemble, standardize and make available glaciological data, including through the publication of the Global Glacier Change Bulletin and electronic data distribution. We also thank the WGMS for its contribution to several IACS working groups, including the standardization of ice-thickness datasets for the working group on Glacier Ice Thickness Estimation and their role in initiating a new working group on Regional Assessments of Glacier Mass Change (RAGMAC).

Gwenn Flowers, Prof Dr
Head, Division of Glaciers, IACS

Regine Hock, Prof Dr
President, IACS

Preface by WDS (ISC)

The World Data System (WDS) is a research programme established in 2009 by ICSU – the predecessor of the International Science Council (ISC) – to promote long-term stewardship of, and universal and equitable access to, quality-assured scientific data and data services, products, and information across all disciplines in the natural and social sciences, and the humanities. Building on the legacy of the World Data Centres and the Federation of Astronomical and Geophysical data analysis Services, WDS facilitates scientific research by coordinating and supporting trustworthy scientific data services for the provision, use, and preservation of relevant datasets, while strengthening their links with the research community. To fulfil its remit, WDS is fostering 'communities of excellence' by certifying Regular Member Organizations – holders and providers of data or data products – and thus helping them become persistent, robust, and trustworthy components of a data infrastructure from which a knowledge system that is both interoperable and distributed can be based.

The WDS certification of Regular Members was replaced, in 2017, by the more rigorous and transparent CoreTrustSeal certification standard. Developed by WDS and the Data Seal of Approval, CoreTrustSeal sets overarching criteria that embrace the prior standards of the two organizations, as well as the ISO 16363 and DIN 31644 standards, and the FAIR principles of Findable, Accessible, Interoperable, and Reusable. CoreTrustSeal has delivered proof of a concept for establishing trustworthy data sources that can be expected to form exemplar foundations for the future data infrastructure. On 13 December 2011, the WGMS became one of the inaugural Regular Members of the new WDS. We are delighted to say that in 2019, WGMS successfully completed the first re-accreditation of its WDS membership, and in doing so, became distinguished globally as a CoreTrustSeal-certified Trustworthy Data Repository. The commitment of WGMS to ensuring that trustworthy scientific data are openly accessible for future generations is typified by it putting forward a representative for the WDS Scientific Committees of 2015–2018 and 2018–2021.

WDS is proud to have the WGMS as a Regular Member. The achievements of WGMS are always impressive, far outweighing the size of its operations. We congratulate the WGMS team of dedicated experts – as well its network of National Correspondents and Principal Investigators worldwide – on the publication of the third biennial Global Glacier Change Bulletin, which is a testament to its efforts. The glacial observations contained in these bulletins are increasingly recognized as a major indicator of climate change, and underscore the significance and timeliness of the work conducted by the WGMS.

We look forward to continuing our collaboration with the WGMS into the new decade.

Rorie Edmunds, Dr
Acting Executive Director, WDS

Preface by University of Zurich and MeteoSwiss

Glaciers are an important element of the physical and cultural heritage of Switzerland. For this reason, glacier research has a long tradition in our country. In line with this tradition, the worldwide coordination of glacier monitoring was initiated in Zurich back in 1894. In 2019, the WGMS celebrated the 125-year jubilee of this international endeavour.

Today, the WGMS compiles standardized data on glacier changes derived from in situ and remote-sensing observations using a collaborative network of scientists distributed across more than 40 countries. The acquired data and subsequently derived information products allow fundamental research to be conducted as input for policy-relevant climate change reports and public outreach. As an example, the IPCC Special Report on the Ocean and Cryosphere in a Changing Climate extensively referred to the recent assessment of global glacier mass changes and the way they contribute to sea-level rise, an assessment made possible only by the vast WGMS data archive.

The WGMS is hosted at the Department of Geography, University of Zurich. The Federal Office of Meteorology and Climatology MeteoSwiss has been supporting its operation for over a decade as part of the national climate observing system, GCOS Switzerland. The two institutions initiated this collaboration with the aim to transform the WGMS from a project-based effort to a professional and long-term operational service. Without a doubt, this transition is a success story: the WGMS today is an internationally recognized service that is strongly rooted in many communities, ranging from universities to policy-makers. In particular, the WGMS provides significant contributions to the international GCOS programme, and it serves the need of many public and private institutions for high-quality up-to-date glacier information.

The University of Zurich and MeteoSwiss are proud partners in this monitoring infrastructure in Switzerland, a global leader in glacier research. We remain strongly committed to continuing the support provided by both our institutions to the WGMS, thereby serving a large and important community worldwide.

Michael Schaepman, Prof Dr
Vice President of Research,
University of Zurich

Bertrand Calpini, Prof Dr
Deputy Director,
MeteoSwiss

Foreword by the WGMS Director

Glaciers around the globe continue to melt at rapid rates. In the time period covered by the present bulletin, the glaciers observed lost about 1 m water equivalent per year which corresponds to a loss of 1,000 litres of water reserve per square meter of ice cover and year. With this, glaciers are continuing the historically unprecedented ice loss observed since the turn of the century and amounting to double the ice loss rates of the 1990s (based on the 'reference' glacier sample). Glaciers are indeed key indicators and a unique means of displaying ongoing climate change. Their rapid decline not only alters the visual landscape of mountain and polar regions, it also has a very real impact on local hazard situations, regional water cycles, and global sea levels.

Glacier monitoring has been coordinated internationally by the WGMS and its predecessor organizations since 1894 (Allison et al., 2019). The initial focus on glacier front variations and Ice Age theories has developed into a comprehensive monitoring strategy for assessing global glacier distribution and the changes in length, area, volume, and mass related to climate change. In 2019, the WGMS celebrated its 125-year jubilee jointly with the IACS during the IUGG General Assembly in Montreal, Canada, and with our National Correspondents during the WGMS General Assembly. The General Assembly event was split into three regional meetings, which allowed us to focus on regional challenges and networks and to diminish by about 50% our own related carbon footprint. Together with our correspondents, we evaluated the implementation status of national monitoring networks with respect to the international monitoring strategy (Gärtner-Roer et al., 2019), discussed recent progress and future challenges (WGMS, 2020), and wrote a joint letter to the UNFCCC expressing our concern for the vanishing of glaciers in this age of persistent climate change (Zemp et al., 2019b).

The present Global Glacier Change Bulletin is the third issue of the new publication series merging the former Fluctuations of Glaciers (Vol. I–X) and Glacier Mass Balance Bulletin (No. 1–12) series. The primary focus is on glaciological mass-balance observations that are complemented by geodetic volume changes and front variation series. It serves as an authoritative source of illustrated and commentated information on global glacier changes based on the latest operations from the scientific collaboration network of the WGMS. The Global Glacier Change Bulletin No. 3 reports the observations from the hydrological years 2015/16 and 2016/17 as well as preliminary results from the 'reference' glaciers (with more than 30 years of ongoing measurements) for 2017/18. Overall, this report presents more than 38,000 lines of database entries from over 10,000 glaciers measured by about 400 Principal Investigators from 40 countries.

The compilation, analysis, and dissemination of standardized data and information on glacier distribution and changes is the core task of the WGMS. In addition, it is worth noting its recent key achievements since the publication of the last bulletin. The work of the WGMS was evaluated by the IACS, the WDS, and the Swiss GCOS Programme, and as a result, was awarded the CoreTrustSeal for its status as a certified data repository and analysis service. The text of the Seal states that the WGMS has performed its core tasks in "exemplary fashion over many years, providing a great service to the glaciological community and the public". At the same time, these reports note that the database infrastructure of WGMS needs to be modernized and updated in order to deal in an efficient manner with the tremendous increase in data from remote sensing. The migration to a new database infrastructure is a key task for the coming years. The WGMS was able to further extend the compilation and computation of glacier volume changes using space-borne sensors within the framework of ESA's Climate Change Initiative (CCI, CCI+) and Europe's Copernicus Climate Change Service (C3S). Combining the glaciological time series with these new geodetic data records, the WGMS led a new assessment of global glacier mass changes and related contributions to sea-level rise from 1961 to 2016 (Zemp et al., 2019a) and developed a new approach for an ad hoc estimation of global glacier mass changes from the most recent glaciological observations (Zemp et al., 2020).

Sincere thanks are extended to WGMS co-workers, National Correspondents, and Principal Investigators around the world and their sponsoring agencies at national and international levels for their long-term commitment to building up an unrivalled database which, despite its limitations, nevertheless remains an indispensable treasury of international snow and ice research, readily available to the scientific community and to the public.

Michael Zemp, Prof Dr
Director, WGMS

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Please note:
In the print version, the main part of the Bulletin and the Appendix are provided separately. Hardcopies including both parts are distributed to about 150 libraries worldwide. The electronic version includes both parts in one file.

1 INTRODUCTION

Internationally coordinated glacier monitoring began in 1894, with the periodic publication of compiled information on glacier fluctuations starting one year later (Forel, 1895; Allison et al., 2019). In the beginning, glacier monitoring focused mainly on observations of glacier front variations and after the late 1940s on glacier-wide mass-balance measurements (Haeberli, 1998). Beginning with the introduction of the Fluctuations of Glaciers (FoG) series in the late 1960s (PSFG, 1967; WGMS, 2012, and volumes in between), standardized data on changes in glacier length, area, volume and mass have been published at pentadal intervals. At the beginning of the 1990s, the Glacier Mass Balance Bulletin series (WGMS, 1991; WGMS, 2013, and issues in between) was designed to speed up access to information on glacier mass balance at two-year intervals. Since the late 1980s, glacier fluctuation data have been organized in a relational database (Hoelzle & Trindler, 1998) and are available in electronic form through websites of the WGMS (https://www.wgms.ch) and GTN-G (https://www.gtn-g.org). The Fluctuations of Glaciers web browser and the wgms Glacier App were launched in order to provide easy access to global glacier change data and to increase the visibility of related observers, their sponsoring agencies, and the internationally coordinated glacier monitoring network.

In the 1990s, an international glacier monitoring strategy was drawn up for providing quantitative, comprehensive, and easily understandable information relating to questions about process understanding, change detection, model validation and environmental impacts with an interdisciplinary knowledge transfer to the scientific community as well as to policymakers, the media and the public (Haeberli et al., 2000; Haeberli, 1998). This strategy has five tiers:

1. organizing glacier monitoring as a multi-component system across environmental gradients, thereby integrating glacier-wide observations at the following levels:
2. extensive glacier mass balance and flow studies within major climatic zones for improved process understanding and calibration of numerical models;
3. determination of glacier mass balance using cost-saving methodologies within major mountain systems to assess the regional variability;
4. long-term observations of glacier length changes and remotely sensed volume changes for large glacier samples within major mountain ranges for assessing the representativeness of mass-balance measurement series; and
5. glacier inventories repeated at time intervals of a few decades by using remotely sensed data.

Based on this strategy, the monitoring of glaciers has been internationally coordinated within the framework of GTN-G under the Global Climate Observing System (GCOS) in support of the United Nations Framework Convention on Climate Change (UNFCCC). The GTN-G is run by the WGMS in close collaboration with the U.S. National Snow and Ice Data Center (NSIDC) and the Global Land Ice Measurements from Space (GLIMS) initiative. The WGMS is a permanent service of the International Association of Cryospheric Sciences of the International Union of Geodesy and Geophysics (IACS/IUGG) and of the World Data System within the International Science Council (WDS/ISC; ISC was created in 2018 as the result of a merger between the International Council for Science, ICSU, and the International Social Science Council, ISSC) and operates under the auspices of the United Nations Environment Programme (UNEP), United Nations Educational, Scientific and Cultural Organization (UNESCO), and the World Meteorological Organization (WMO).

To further document the evolution and to clarify the physical processes and relationship involved in global glacier changes, the WGMS collects standardized information on changes in glacier length, area, volume, and mass through annual calls-for-data. In accordance with an agreement between the international organizations and the countries involved, a one-year retention period is granted to allow investigators time to properly analyze, document, and publish their observations before making them available. In 2014, a near-time reporting was introduced for the official ‘reference‘ glaciers (with more than 30 years of continued mass-balance observations) in agreement with the responsible Principal Investigators. This allows the WGMS to report preliminary mass-balance estimates as soon as a few months after the end of the corresponding observation period. All submitted data are considered public domain and are made available in print and digital form through the WGMS at no cost under the requirement of appropriate citation.

The new Global Glacier Change Bulletin series merges the former Fluctuations of Glaciers (Vol. I–X) and Glacier Mass Balance Bulletin (No. 1–12) series. It aims to provide an integrative assessment of global glacier changes every two years. In this process, the main focus is on mass-balance measurements based on the glaciological method (cf. Cogley et al., 2011). This method provides quantitative results at high temporal resolution, which are essential for understanding climate-glacier processes and for allowing the spatial and temporal variability of the glacier mass balance to be captured, even with only a small sample of observation points. The glaciological observations are complemented by results from the geodetic method (cf. Cogley et al., 2011) to extend the glaciological sample in space and time. The geodetic method provides overall glacier volume changes over a longer time period by repeat mapping from ground, air- or space-borne surveys and subsequent differencing of glacier surface elevations. It is recommended to periodically validate and calibrate annual glaciological mass-balance series with decadal geodetic balances to detect and remove systematic biases (Zemp et al., 2013). In addition, glacier front-variation series are reported for the documentation of clearly visibly glacier reactions to mass changes and for extending observations of glacier fluctuations backward in time.

The Global Glacier Change Bulletin No. 3 is organized in three main sections: global summary, regional summaries, and detailed information for selected glaciers. The global summary provides an overview of reported data and of glaciological balance results for the observation periods 2015/16 and 2016/17, including preliminary values for the ‘reference‘ glaciers based on the near-time reporting for 2017/18. This first section contains a global map of available glacier fluctuation data, tables with key statistics on reported data and glaciological balance results as well as a set of global figures summarizing reported data and results of changes in glacier mass, volume and length. The second section consists of standardized facts and figures on glacier changes for all glacierized regions of the world, each supplemented with mass balance and front-variation series from selected glaciers. The third section contains detailed information for selected glaciers to provide an insight into the results of the glaciological method. In addition, a list is included naming all Principal Investigators and their sponsoring agencies for the observation periods of the current bulletin as well as of all National Correspondents as of 2020. Data tables with the results for the observation periods of the current bulletin are given in the Appendix. Due to the large volume of available data, we printed only geodetic records (from all survey periods) for glaciers with glaciological observations in the current bulletin. The full report including the data Appendix is made available in digital format on the WGMS website as well as being printed and shipped to libraries around the world as a long-term guarantee for data availability. Full access to the latest and earlier versions of the database, including addenda from earlier years, can be accessed through a data browser or downloaded in csv data format from the WGMS website (https://www.wgms.ch).

2 GLOBAL SUMMARY

Pioneer surveys of accumulation and ablation of snow, firn and ice at isolated points date back to the end of the 19th century and the beginning of the 20th century (e.g., Mercanton, 1916). In the 1920s and 1930s, short-term observations (up to one year) were carried out at various glaciers in the Nordic countries. Continuous, modern series of annual/seasonal measurements of glacier-wide mass balance were started in the late 1940s in Sweden, Norway, and in western North America, followed by a growing number of glaciers in the European Alps, North America, and other glacierized regions. In the meantime, more than 7,000 glaciological mass-balance observations from 460 glaciers have been collected and made available by the WGMS.

For the observation periods covering the hydrological years 2015/16 and 2016/17, 316 annual mass-balance observations were compiled based on 163 glaciers worldwide. Of these observations, 73%, 58%, and 44% were reported including seasonal mass balance, mass distribution with elevation, and point measurements, respectively. In addition, more than 31,000 geodetic thickness changes and 908 front variations were reported from 9,868 and 522 glaciers, respectively, covering the current observation periods. The large number of geodetic observations represents a major increase as compared to earlier bulletins and is the result of the compilation of glacier volume changes provided by the glaciological community using space-borne sensors within the framework of ESA's Climate Change Initiative (CCI, CCI+) and Europe's Copernicus Climate Change Service (C3S). A global overview of available glacier change data is shown in Figure 2.1. Reported data for the observation periods covered by the present bulletin are given in Table 2.1. In addition, preliminary balance estimates for 2017/18 are given as reported for the 'reference' glaciers.

Table 2.1 Annual mass balances for the observation periods 2015/16 and 2016/17 as well as preliminary values (*) for 'reference' glaciers (highlighted in grey) for 2017/18. Abbreviations and units: PU = political unit; B16, B17, B18 in mm w.e.; BwBs = winter and summer balances; ELA = equilibrium line altitude; AAR = accumulation area ratio; B elevation = balance-elevation distribution; b point = point balances; FV = front variations reported (x) for current observation periods; TC (since 2008) = thickness changes from geodetic surveys of the past decade.

PU	Glacier name	1st/last/nr years	B16	B17	B18*	BwBs	ELA-AAR	B elevation	b point	FV	TC (since 2008)
AQ	Bahía del Diablo	2000/2018/19	–561	–380		o	x	x	x	x	x
AQ	Hurd	2002/2017/16	290	–420		x	x	o	o	o	o
AQ	Johnsons	2002/2017/16	530	–30		x	x	o	o	o	o
AR	Agua Negra	2015/2018/04	–284	298		x	o	o	o	x	x
AR	Brown Superior	2008/2018/11	167	798		o	o	o	o	o	x
AR	Conconta Norte	2008/2018/11	429	4725		o	o	o	o	o	x
AR	De Los Tres	1996/2018/08	–673	–1767		x	x	x	x	o	o
AR	Los Amarillos	2008/2018/11	2222	1431		o	o	o	o	o	o
AR	Martial Este	2001/2017/17	55	–706		x	x	x	x	o	o
AT	Goldbergkees	1989/2018/30	–860	–1806		x	x	x	o	x	o
AT	Hallstätter Gletscher	2007/2018/12	–1130	–1194		x	x	x	o	x	o
AT	Hintereisferner	1953/2018/66	–1263	–1826	–1963	x	x	x	x	x	x
AT	Jamtalferner	1989/2018/30	–800	–1825		x	x	x	o	x	o
AT	Kesselwandferner	1953/2018/66	–500	–1054	–1619	o	x	x	x	o	o
AT	Kleinfleisskees	1999/2018/20	–432	–1791		x	x	x	o	x	o
AT	Obersulzbachkees	2017/2017/01		–655		o	o	o	o	o	o
AT	Pasterze	1980/2018/32	–1163	–1593	–1420	o	x	x	o	x	o

PU	Glacier name	1st/last/nr years	B16	B17	B18*	BwBs	ELA-AAR	B elevation	b point	FV	TC (since 2008)
AT	Stubacher Sonnblickkees[1]	1946/2017/72	–828	–1850		o	x	o	o	x	o
AT	Venedigerkees	2013/2017/05	–467	–655		x	x	x	o	o	o
AT	Vernagtferner	1965/2018/54	–781	–1335	–1419	x	x	x	x	x	x
AT	Wurtenkees[2]	1983/2017/35	–1250	–1706		o	x	x	x	x	o
AT	Zettalunitz/ Mullwitzkees	2007/2018/12	–858	–1340		x	x	x	o	x	o
BO	Charquini Sur	2003/2017/15	–2484	–1112		o	x	x	x	x	o
BO	Zongo	1992/2017/26	–1024	–237		o	x	x	x	x	o
CA	Devon Ice Cap NW	1961/2017/57	–483	–153		x	x	o	o	o	o
CA	Helm	1975/2017/41	–1280	–907		x	x	o	o	o	o
CA	Meighen Ice Cap	1960/2017/58	–791	126		x	x	o	o	o	o
CA	Melville South Ice Cap	1963/2017/55	–792	38		x	x	o	o	o	o
CA	Peyto	1966/2017/51	–1844	–1605		x	x	o	o	o	o
CA	Place	1965/2017/52	–1330	–819		x	x	o	o	o	o
CA	White	1960/2017/55	–268	116		o	x	x	x	o	x
CH	Adler	2006/2018/13	–590	–947		x	x	x	x	o	x
CH	Allalin	1956/2018/63	–269	–1778	–801	x	x	x	x	x	x
CH	Basòdino	1992/2018/27	–979	–963		x	x	x	x	x	x
CH	Claridenfirn[3]	1915/2018/104	–424	–1196		x	x	x	x	o	o
CH	Corbassière	1997/2018/22	–450	–1336		x	x	x	x	x	x
CH	Corvatsch South[4]	2014/2018/05	–751	–1976		x	x	x	x	o	o
CH	Findelen	2005/2018/14	–723	–944		x	x	x	x	x	x
CH	Giétro	1967/2018/52	–414	–1666	–664	x	x	x	x	x	x
CH	Gries	1962/2018/57	–1191	–2437	–2045	x	x	x	x	x	x
CH	Hohlaub	1956/2018/63	–437	–1791		x	x	x	x	x	x
CH	Murtèl[4]	2013/2018/06	–462	–1408		x	x	x	x	o	x
CH	Pizol[4]	2007/2018/12	–699	–1652		x	x	x	x	x	x
CH	Plaine Morte	2010/2018/09	–248	–2277		x	x	x	x	o	o
CH	Rhone	1885/2018/37	–454	–1248		x	x	x	x	x	x
CH	Sankt Anna[4]	2012/2018/07	–926	–1123		x	x	x	x	x	x
CH	Schwarzbach[4]	2013/2018/06	–1083	–1554		x	x	x	x	o	x
CH	Schwarzberg	1956/2018/63	–164	–1768		x	x	x	x	x	x
CH	Sex Rouge[4]	2012/2018/07	–144	–2541		x	x	x	x	x	x
CH	Silvretta	1919/2018/100	–606	–1513	–1389	x	x	x	x	x	x
CH	Tsanfleuron	2010/2018/09	–226	–2242		x	x	x	x	x	x
CL	Amarillo[4]	2008/2018/11	3824	1403		o	o	o	o	o	x
CL	Echaurren Norte[5]	1976/2017/42	–2284	–353		x	o	o	o	o	x
CL	Mocho Choshuenco SE	2004/2018/09	–1319	–2469		o	x	x	x	o	o
CN	Parlung No. 94	2006/2017/12	–1069	–896		o	x	x	x	x	x
CN	Urumqi Glacier No. 1[6]	1959/2018/60	–780	–682	–711	x	x	x	o	x	x
CN	Urumqi Glacier No. 1 E-Branch	1988/2018/31	–939	–773		x	x	x	x	x	o
CN	Urumqi Glacier No. 1 W-Branch	1988/2018/31	–498	–520		x	x	x	x	x	o
CO	Conejeras[5]	2006/2018/13	–5545	–4265		o	x	x	x	x	x
CO	Ritacuba Blanco	2009/2018/10	–514	339		o	x	x	x	x	x
EC	Antizana 15 Alpha	1995/2018/24	–257	–379		o	x	x	x	x	o

PU	Glacier name	1st/last/nr years	B16	B17	B18*	BwBs	ELA-AAR	B elevation	b point	FV	TC (since 2008)
ES	Maladeta[5]	1992/2018/27	–843	–1672		x	x	x	o	x	o
FR	Argentière	1976/2017/42	–680	–1500		o	o	o	o	x	x
FR	Gébroulaz	1995/2017/23	–410	–1180		o	o	o	o	o	o
FR	Ossoue[5]	2002/2017/16	–1370	–2390		x	x	o	o	x	o
FR	Saint Sorlin	1957/2017/61	–1140	–2640		o	o	o	o	x	o
FR	Sarenness[5]	1949/2018/70	–1510	–3000	–1960	x	o	o	o	o	o
FR	Tré la Tête	2014/2016/03	–820			x	x	x	x	x	x
GL	Freya	2008/2017/10	–540	–24		x	x	x	x	o	o
GL	Mittivakkat	1996/2017/22	–1766	–1150		o	x	x	o	o	x
GL	Qasigiannguit	2013/2018/06	–1565	–51		o	x	x	x	o	o
IS	Brúarjökull	1993/2018/26	–342	26		x	x	o	o	o	x
IS	Dyngjujökull	1992/2018/21	–236	230		x	x	o	o	o	o
IS	Eyjabakkajökull	1991/2018/27	–930	–452		x	x	o	o	o	o
IS	Hofsjökull E	1989/2017/29	–1330	–650		x	x	o	o	o	x
IS	Hofsjökull N	1988/2017/30	–1130	–610		x	x	o	o	o	o
IS	Hofsjökull SW	1990/2017/28	–440	340		x	x	o	o	o	x
IS	Köldukvíslarjökull	1992/2018/25	–642	–41		x	x	o	o	o	o
IS	Langjökull Ice Cap	1997/2018/22	–1677	–959		x	x	o	o	o	x
IS	Tungnárjökull	1986/2018/27	–1415	–449		x	x	o	o	x	o
IT	Calderone[4,5]	1995/2017/23	–1041	–594		x	o	o	x	x	x
IT	Campo settentrionale[5]	2010/2018/09	–840	–1856		o	x	o	o	o	x
IT	Caresèr[5]	1967/2018/52	–1748	–2747	–1981	x	x	x	x	o	o
IT	Ciardoney[5]	1992/2017/26	–1800	–1390		x	x	x	o	x	o
IT	Fontana Bianca/ Weissbrunnferner	1984/2017/33	–1312	–1880		x	x	x	x	x	o
IT	Vedretta de La Mare	2003/2017/15	–654	–1904		x	x	x	o	x	o
IT	Lunga/Langenferner	2004/2017/14	–1010	–2066		x	x	x	x	x	x
IT	Lupo	2010/2018/09	–973	–1347		x	x	o	o	x	x
IT	Malavalle/ Übeltalferner	2002/2017/16	–871	–1207		x	x	x	x	x	o
IT	Pendente/ Hangender Ferner	1996/2017/22	–1195	–1589		x	x	x	x	x	o
IT	Vedretta occ. di Ries/ Westlicher Rieserferner	2009/2018/10	–793	–1239		x	x	x	x	o	o
IT	Suretta meridionale[5]	2010/2018/09	–1336	–2283		x	x	o	o	x	x
JP	Hamaguri Yuki[4]	1967/2018/52	–3274	2901		x	o	o	o	o	o
KG	Abramov	1968/2018/38	–274	–354		x	x	x	x	x	x
KG	Batysh Sook/ Syek Zapadniy	1971/2018/13	–425	–872		x	x	x	x	x	o
KG	Bordu	2016/2018/03	–450	–1480		x	x	x	o	o	x
KG	Glacier No. 354 (Akshiyrak)	2011/2018/08	–202	–636		x	x	x	x	x	x
KG	Glacier No. 599 (Kjungei Ala-Too)	2015/2017/03	–725	–197		o	x	x	x	o	o
KG	Golubin	1969/2018/34	130	–144		x	x	x	x	x	x
KG	Kara-Batkak	1957/2018/47	–390	–1120		x	x	x	o	x	x
KG	Sary Tor (Glacier No. 356)	1985/2018/09	–790	–1340		x	x	x	o	x	x
KZ	Ts. Tuyuksuyskiy	1957/2018/62	561	–1113	–75	x	x	x	x	x	x

PU	Glacier name	1st/last/nr years	B16	B17	B18*	BwBs	ELA-AAR	B elevation	b point	FV	TC (since 2008)
NO	Ålfotbreen	1963/2018/55	–635	–750	–2040	x	x	x	o	o	x
NO	Austdalsbreen[7]	1988/2017/30	–1050	191		x	x	x	o	o	x
NO	Blomstølskardsbreen	2007/2017/11	701	–350		x	x	x	o	x	o
NO	Engabreen	1970/2018/49	–226	1249	–1260	x	x	x	o	x	x
NO	Gråsubreen	1962/2018/57	–415	–708	–1900	x	o	x	o	o	x
NO	Hansebreen	1986/2017/32	–1304	–1179		x	x	x	o	o	x
NO	Hellstugubreen	1962/2018/57	–339	–591	–1600	x	x	x	o	x	x
NO	Langfjordjøkelen	1989/2017/27	–1664	–267		x	x	x	o	x	x
NO	Moesevassbreen	2017/2017/01		135		x	x	x	o	o	o
NO	Nigardsbreen	1962/2018/57	486	587	–840	x	x	x	o	x	x
NO	Rembesdalskåka	1963/2018/56	–386	638	–1410	x	x	x	o	x	x
NO	Rundvassbreen	2002/2017/10	–490	437		x	x	x	o	x	x
NO	Storbreen	1949/2018/70	–804	–517	–770	x	x	x	o	x	x
NO	Svelgjabreen	2007/2017/11	–7	–159		x	x	x	o	x	o
NP	Mera	2008/2018/11	–200	–560		o	x	o	o	o	x
NP	Pokalde	2010/2018/09	–460	–890		o	x	o	o	o	o
NP	Rikha Samba	1999/2018/08	–334	–230		o	x	x	o	o	x
NP	West Changri Nup	2011/2018/08	–750	–2560		o	x	o	o	o	x
NP	Yala	2012/2018/07	–609	–1183		o	x	x	x	x	x
NZ	Brewster	2005/2018/14	–1193	553		x	x	o	o	x	x
NZ	Rolleston	2011/2018/08	–1006	275		x	x	o	x	o	o
PE	Artesonraju	2005/2018/14	–1598	–736		o	x	x	o	x	o
PE	Yanamarey	1978/2018/24	–2505	–1032		o	x	x	o	x	o
RU	Djankuat	1968/2018/51	–730	–740	440	x	o	o	o	x	x
RU	Garabashi	1984/2018/35	–980	–930	–888	x	x	o	o	o	x
SE	Mårmaglaciären	1990/2018/28	–370	260		x	x	x	o	x	x
SE	Rabots glaciär	1946/2018/35	–650	–170	–1680	x	x	x	o	o	x
SE	Riukojietna	1986/2018/30	–1060	150		x	x	x	o	x	x
SE	Storglaciären	1946/2018/73	–240	470	–1600	x	x	x	x	x	x
SJ	Austre Brøggerbreen	1967/2018/52	–1450	–790	–880	x	x	o	o	o	x
SJ	Austre Lovénbreen	2008/2018/11	–1114	–399		x	x	o	o	x	x
SJ	Hansbreen[7]	1989/2018/28	–1078	–697		x	x	x	o	x	o
SJ	Irenebreen	2002/2017/16	–1468	–1420		o	x	o	o	o	x
SJ	Kongsvegen[7]	1987/2018/32	–320	40		x	x	o	x	o	o
SJ	Kronebreen[7]	2003/2017/09	–160	50		x	x	o	o	o	o
SJ	Midtre Lovénbreen	1968/2018/51	–1200	–640	–760	x	x	o	o	o	x
SJ	Nordenskioeldbreen	2006/2018/13	16	304		x	x	o	x	o	o
SJ	Waldemarbreen	1995/2017/23	–1773	–1425		o	x	x	x	o	x
SJ	Werenskioldbreen	1980/2018/09	–1795	–890		x	x	x	o	o	x
US	Blue Glacier	1956/2016/47	–1520			x	x	o	x	o	x
US	Columbia (2057)	1984/2018/35	–1180	–750	–630	o	x	x	o	x	o
US	Daniels	1984/2018/35	–640	–540		o	x	o	o	o	o
US	Easton	1990/2018/29	–820	–260		o	x	o	o	x	o
US	Eel[5]	2014/2016/03	–400			x	x	o	x	o	x
US	Emmons	2003/2016/12	–10			x	x	o	x	o	o
US	Gulkana	1966/2017/52	–1539	–1588		x	x	o	x	o	o

PU	Glacier name	1st/last/nr years	B16	B17	B18*	BwBs	ELA-AAR	B elevation	b point	FV	TC (since 2008)
US	Ice Worm	1984/2018/35	–780	–570		o	x	o	o	o	o
US	Lemon Creek	1953/2018/66	–1879	–1147	–2310	x	x	o	x	o	o
US	Lower Curtis	1984/2018/35	–1550	–650		o	x	o	o	x	o
US	Lynch	1984/2018/35	–1420	–320		o	x	o	o	o	o
US	Noisy Creek	1993/2016/24	–890			x	x	o	x	o	o
US	North Klawatti	1993/2016/24	–1150			x	x	o	x	o	o
US	Rainbow	1984/2018/35	–880	510	–530	o	x	x	o	x	o
US	Sandalee	1994/2016/23	110			x	x	o	x	o	o
US	Sholes	1990/2018/29	–1520	120		o	x	o	o	x	o
US	Silver	1993/2016/24	520			x	x	o	x	o	o
US	South Cascade	1953/2017/62	–927	–684		x	x	o	x	o	o
US	Sperry	2005/2017/13	90	–430		x	o	o	x	o	o
US	Taku[8]	1946/2018/73	–780	–950		o	x	o	o	o	o
US	Wolverine	1966/2017/52	–163	–1018		x	x	o	x	o	o
US	Yawning[5]	1984/2018/35	–960	–640		o	x	o	o	o	o

1 = based on Ba-AAR regression from 1963/64 to 1979/80

2 = influenced by strong glacier disintegration and artificial snow management

3 = balances include estimates for dry calving

4 = glacieret (cf. Cogley et al., 2011)

5 = influenced by strong glacier disintegration

6 = In 1993, Urumqi Glacier No. 1 divided into two parts: the East Branch and the West Branch.

7 = glacier influenced by calving

8 = The mass balance of this tidewater glacier is determined by a combination of snow pit, ablation stake measurements, observations of the transient snowline, and the ELA.

Climate (change)-related trend analysis is, in the ideal case, based on long-term measurement series. Ongoing glaciological mass-balance records for more than 30 continuous observation years are now available for a set of 41 'reference' glaciers. These glaciers have well-documented and long-term mass-balance programmes based on the direct glaciological method (cf. Østrem & Brugman, 1991; Cogley et al., 2011) and are not dominated by non-climatic drivers such as calving or surge dynamics. Furthermore, it is recommended that these glaciological results be validated and, if necessary, calibrated with independent results from the geodetic method (cf. Zemp et al., 2013). In collaboration with the GTN-G Advisory Board, the criteria for being awarded the status of a 'reference' glacier were revised in 2017 providing more details with regard to preconditions, length of time series, observational gaps, detailed information, validation and calibration. Results from this sample of glaciers in North and South America and Eurasia are summarized in Table 2.2. Note that the 'reference' glacier sample slightly changes between bulletins. As such, the three glaciers in the Russian Altay (Maliy Aktru, Leviy Aktru, Vodopadniy) are not included in this bulletin since the corresponding observation programmes were interrupted after 2012. Instead, Garabashi (RU), Pasterze (AT), and Rabots glaciär (SE) have attained sufficiently long time series and thus fulfill the 'reference' glacier criteria.

Table 2.2 Summarized mass balance data. A statistical overview of the results of the 'reference' glacier sample is given for the three recent reporting periods 2016, 2017, and 2018* (upper table) in comparison with corresponding values averaged for the decades 1981–1990, 1991–2000, 2001–2010, and 2011–2018 (lower table). All annual balance values in mm w.e.; * = preliminary values.

	2015/16	2016/17	2017/18*
mean specific (annual) mass balance	–846	–878	–1239
standard deviation	598	947	664
minimum value	–2284	–3000	–2310
maximum value	561	1249	440
nr of positive/reported balances	2/41	8/41	1/28
mean AAR	29%	32%	13%

decadal averages of:	1981–1990	1991–2000	2001–2010	2011–2018
mean specific (annual) mass balance	–291	–433	–806	–915
standard deviation	753	809	864	867
minimum	–1941	–2509	–2940	–2851
maximum	1861	1336	916	1032
avg nr of positive/reported balances	11/40	10/41	7/40	6/38
mean AAR	47%	44%	34%	29%

Taking the two years of this reporting period and preliminary results for 2017/18 together (from the near-time reporting), the mean annual mass balance was –0.99 m w.e. per year. This is 22% more negative than the mean annual mass balance for the first decade of the 21st century (2001–2010: –0.81 m w.e. per year) which was without precedent on a global scale, at least for the time period with available observations (Zemp et al., 2015). Since the turn of the century, the maximum mass loss of the 1980–2000 time period (observed in 1997/98) was exceeded five times: in 2002/03, 2005/06, 2010/11, 2014/15, and again in 2017/18 (based on preliminary values). The percentage of positive annual mass balances decreased from 28% in the 1980s to 10% (2015/16–2017/18), and there have been no more years with a positive mean balance for more than four decades. The melt rate and cumulative loss in glacier thickness continues to be extraordinary. Furthermore, the analysis of mean AAR values shows that the glaciers are in strong and increasing imbalance with the climate and hence will continue to lose mass even if climate remained stable (Mernild et al., 2013).

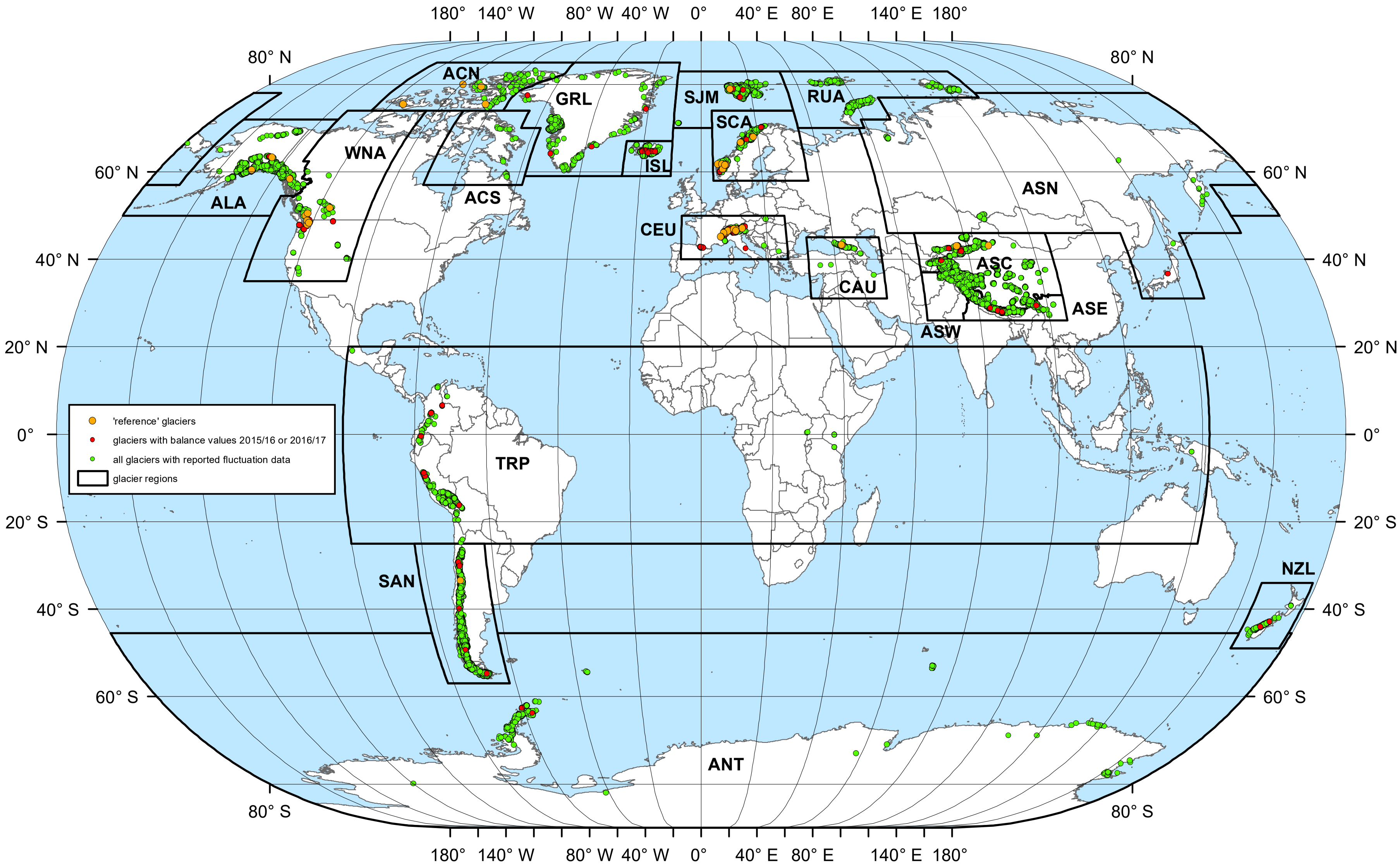
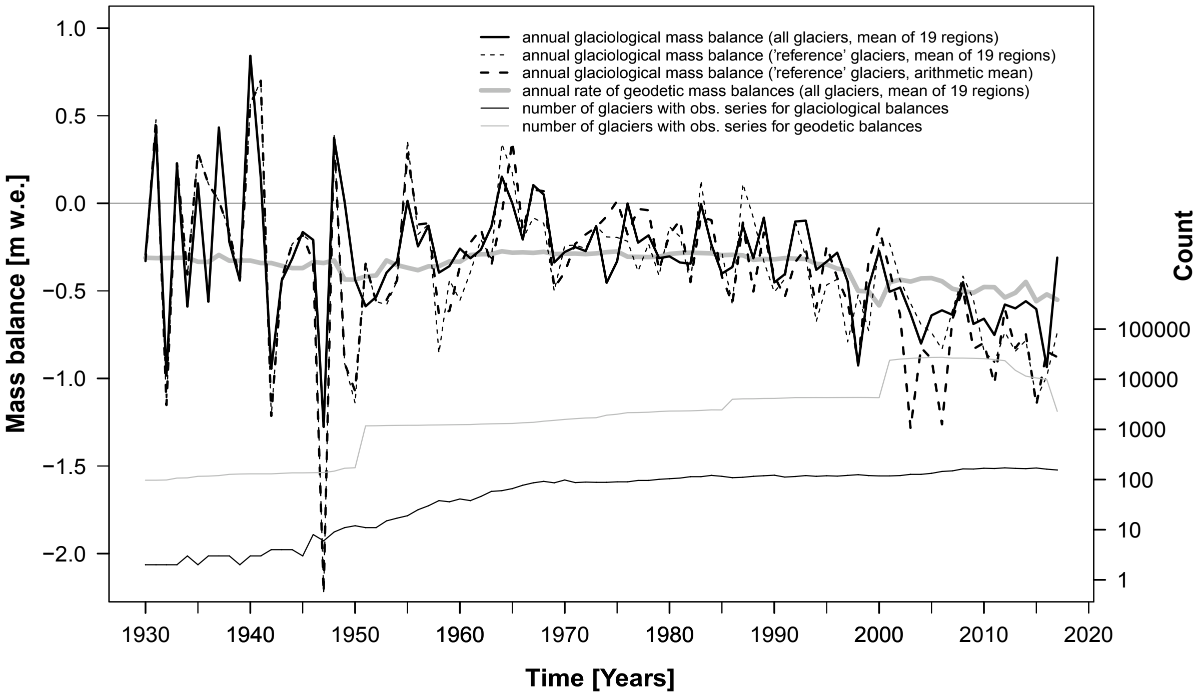


Figure 2.1 Location of the 32,500 glaciers for which fluctuation data or special events are available from the WGMS. This overview includes 163 glaciers with reported mass balance data for the observation periods 2015/16 and 2016/17, and 41 'reference' glaciers with well-documented and independently calibrated, long-term mass balance programmes based on the glaciological method. The glacier regions are based on GTN-G (2017).



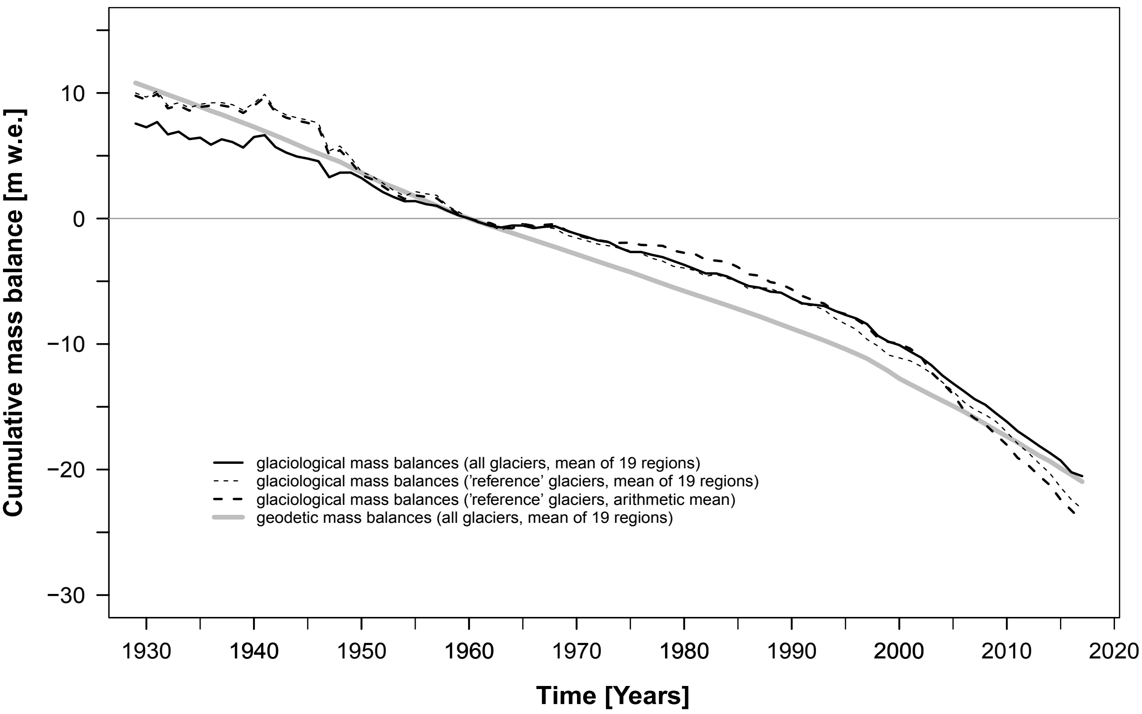


Figure 2.2 Global averages of observed mass balances from 1930 to 2017. Annual glaciological balances (m w.e.) and annual rates of geodetic balances (m w.e. a^{-1}) are shown together with the corresponding number of observed glaciers (upper graph). Cumulative annual averages relative to 1960 (lower graph). Geodetic balances were calculated assuming a glacier-wide average density of 850 kg m^{-3}. Note that the strong variability in the glaciolgocal data before 1960 is due to the small sample size.

The arithmetic mean of the 'reference' glaciers included in the analysis is based on a small sample and influenced by the large proportion of Alpine and Scandinavian glaciers. Therefore, mean values are also calculated for (i) all mass balances available, independent of record length, and (ii) using only one single value (averaged) for each of the 19 regions (cf. GTN-G, 2017). Looking at the regional average of the ‘reference’ glaciers, the year 2015/16 resulted in the second most negative reported balance (after 2014/15) since 1960 with an annual average ice loss of 0.9 m w.e. All years since 2010 rank in the top eleven with respect to glacier mass loss. Note that extreme balance values before 1960 are strongly influenced by the very small sample size. Looking at the arithmetic mean, the three most negative balance years were 2002/03, 2005/06, and 2014/15, which were influenced by very negative balances reported from the large sample of European glaciers. The years 2015/16 and 2016/17 ranked 8th and 7th, respectively. Figure 2.2 shows the number of reported observation series as well as annual and cumulative results for all three means. In their general trend and magnitude, all three averages relate quite closely to each other and are in good agreement with the results from a moving-sample averaging of all available data (cf. Kaser et al., 2006; Zemp et al., 2009; Zemp et al., 2015). The global average cumulative mass balance indicates a strong mass loss in the first decade after the start of measurements in 1946 (though based on few observation series only), slowing down in the second decade (1956–1965; based on observations above 30° N only), followed by a moderate ice loss between 1966 and 1985 (with data from the Southern Hemisphere only since 1976) and a subsequent acceleration of mass loss to the present time (2017).

The geodetic method (cf. Cogley et al., 2011) provides overall glacier-volume changes over a longer time period by repeat mapping from ground, air- or spaceborne surveys and subsequent differencing of glacier-surface elevations. The geodetic results allow the glaciological sample to be extended in both space and time (Figures 2.2, 2.3). Since the last bulletin, we were able to boost the geodetic sample from a few thousand records to more than 90,000 observations from 27,800 glaciers. The difference in survey periods between the glaciological and the geodetic data becomes manifest in the variability of the two graphs: a smooth line with step changes towards more negative balances for the geodetic sample, and a strong variability with a negative trend for the glaciological observations. Overall, the results from both methods match with regard to the increased ice loss towards the early 21st century.

In a recent study, Zemp et al. (2019a) combined glaciological and geodetic (from DEM differencing) datasets to a global assessment and show that glaciers alone lost 9,625 billion tons of ice between 1961 and 2016, corresponding to a sea-level equivalent of 27 millimetres. The global mass loss of glacier ice has increased significantly in the last 30 years and currently amounts to 335 billion tons of lost ice each year. This corresponds to an increase in sea levels of almost 1 millimetre per year. The melted ice of glaciers therefore accounts for 25 to 30% of the currently observed increase in global sea levels. This ice loss of all glaciers roughly corresponds to the mass loss of Greenland’s Ice Sheet, and clearly exceeds that of the Antarctic Ice Sheet.

Direct observations of glacier-front positions extend back into the 19th century. This data sample has been extended in space based on remotely sensed length change observations and continued back in time by reconstructed front variations. Overall, the database contains more than 47,500 observations which allow the front variations of about 2,500 glaciers to be illustrated and quantified back into the 19th century. Additional reconstruction series from 38 glaciers extend far into the Little Ice Age (LIA) period, i.e., to the 16th century. The global compilation of front-variation data, as qualitatively summarized in Figure 2.4, shows that glacier retreat has been dominant for the past two centuries, with LIA maximum extents reached (in some regions several times) between the mid-16th and the late 19th centuries. The qualitative summary of cumulative mean annual front variations (Fig. 2.4) reveals a distinct trend toward global centennial glacier retreat, with the early 21st century marking the historical minimum extent in all regions (except New Zealand (NZL) and Antarctic and Sub Antarctic Islands (ANT), where few observations are available) at least for the time period of documented front variations. Intermittent periods of glacier re-advance, such as those in the European Alps around the 1920s and 1970s or in Scandinavia in the 1990s, are barely to be found in Figure 2.4a because they do not even come close to achieving LIA maximum extents. Figure 2.4b provides a better overview of these re-advance periods by highlighting the years with a larger ratio of advancing glaciers. A qualitative overview of regional changes from both the glaciological and the geodetic method is given in Figure 2.3 and discussed in more detail in Section 3 on regional summaries.

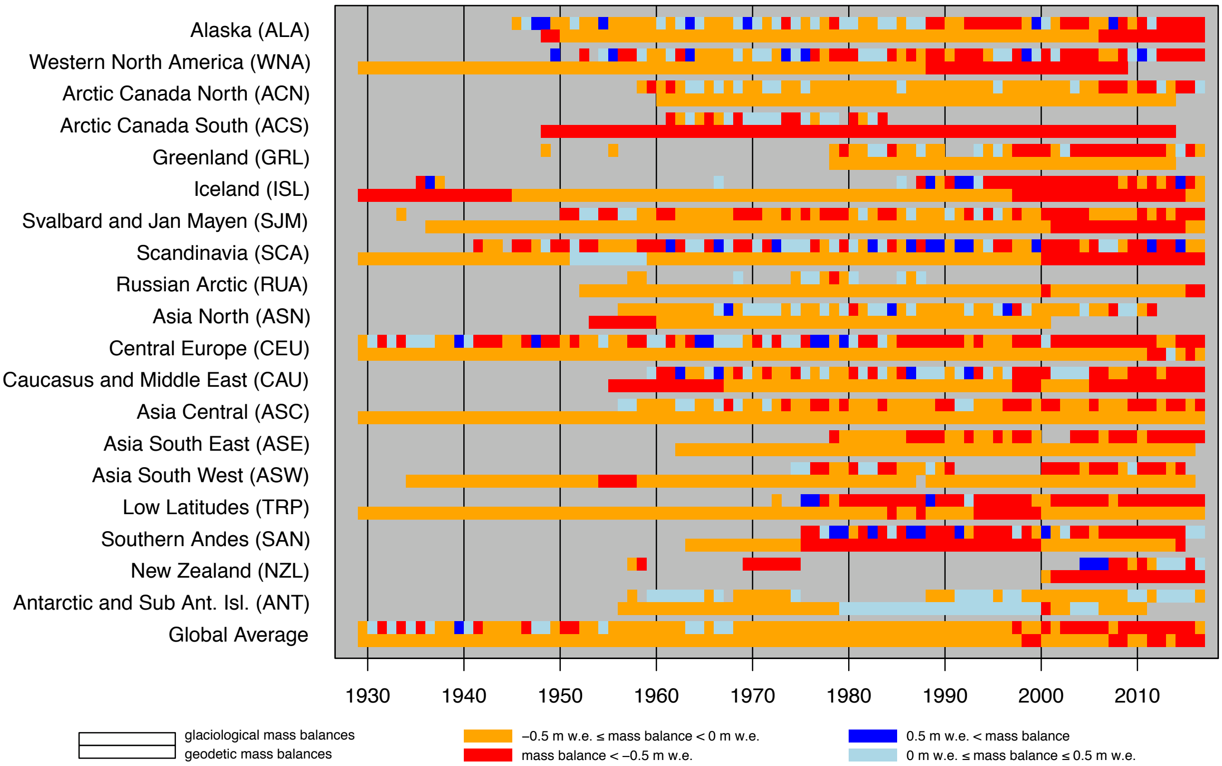


Figure 2.3 Regional mass balances from 1930 to 2017. Annual glaciological balances (m w.e.) and annual rates of geodetic balances (m w.e. a^{-1}) are shown for 19 glacier regions and for the global average. Geodetic mass balances were calculated assuming a glacier-wide average density of 850 kg m^{-3}.

A global and regional overview of the observational datasets is given in Figures 2.3–2.7. Overall, the Fluctuations of Glaciers database contains around 194,000 observations from 32,500 glaciers (Table 2.3). A look at all the data samples reveals that the glaciological sample has been steadily increasing over the past 25 years. This reflects the successful efforts of the observers to continue and extend their monitoring programmes in several regions as well as of the WGMS to compile these results through its collaboration network. The geodetic sample could be greatly increased in many regions since the publication of the last bulletin. The decline in the geodetic sample over the past years has to do with the typically decadal time period and the normal post-processing character of geodetic surveys. In the case of the observational front-variation sample, the decrease in observations is reported to be caused mainly by the abandonment of in-situ programmes without remote-sensing compensation.

Table 2.3 Database statistics and increase from current observation periods.

Dataset	Number of glaciers	Number of observations	Increments since WGMS (2017)
Front variations (from observations)	2,541	45,840	+42/+1,148
Front variations (from reconstructions)	38	1,855	+0/+0
Mass balance (glacier-wide)	460	7,032	+10/+470
Mass balance (point information)	135	41,022	+10/+3,559
Volume/thickness change (geodetic method)	27,803	94,751	+23,522/+89,426
Special events	2,540	3,398	+83/+353
Glacier maps	85	140	+10/+23

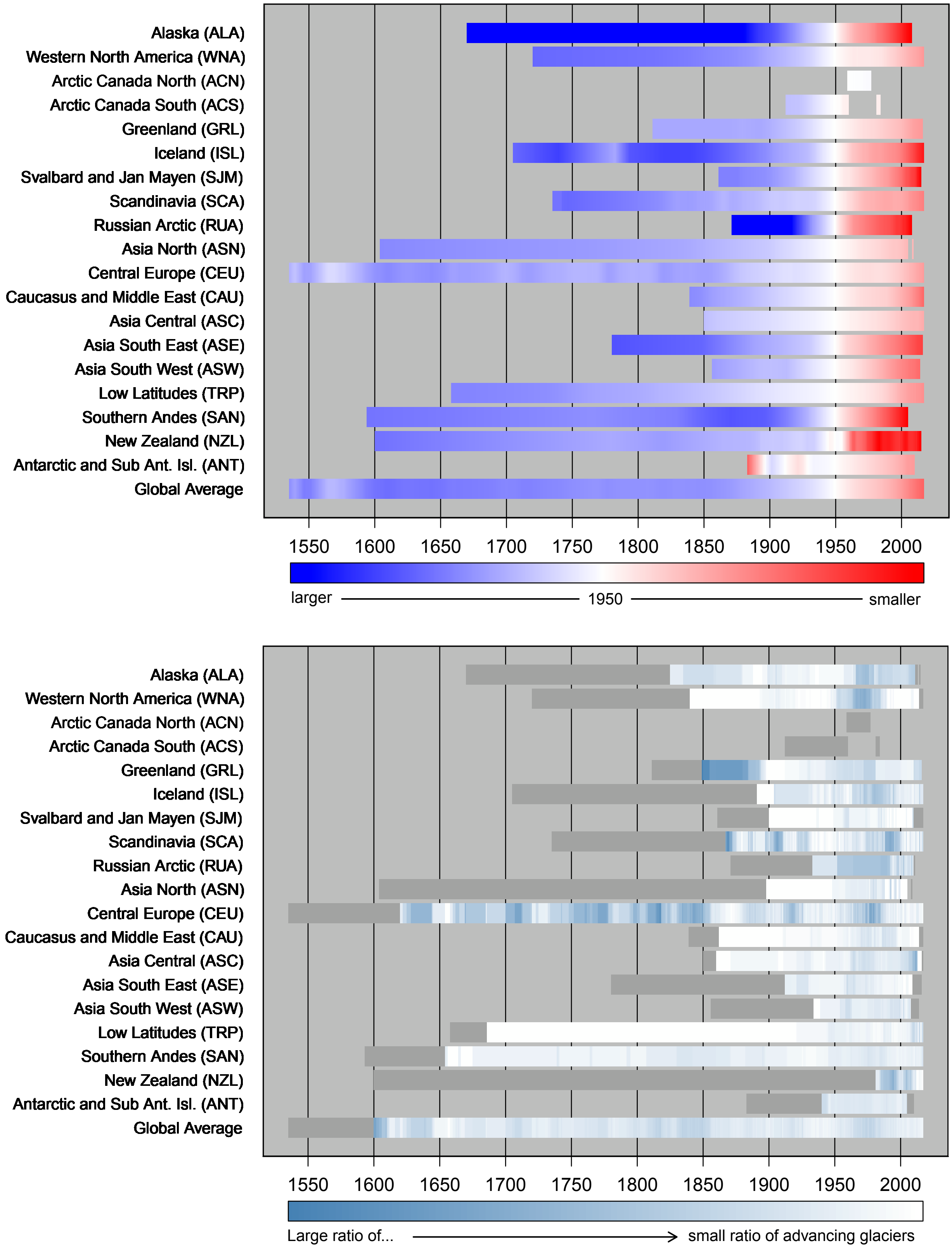


Figure 2.4 Global front variation observations from 1535 to 2017. (a) Qualitative summary of cumulative mean annual front variations. The colours range from dark blue for maximum extents (+2.5 km) to dark red for minumum extents (−1.6 km) relative to the extent in 1950 as a common reference (i.e. 0 km in white). (b) Qualitative summary of the ratio of advancing glaciers. The colours range from white for years with no reported advances to dark blue for years with a large ratio of advancing glaciers. Periods with very small data samples ($n < 6$) are masked in dark grey. The figure is based on all available front variation observations and reconstructions, excluding absolute annual front variations larger than 210 m a^{-1} in order to reduce the effects of calving and surging glaciers.

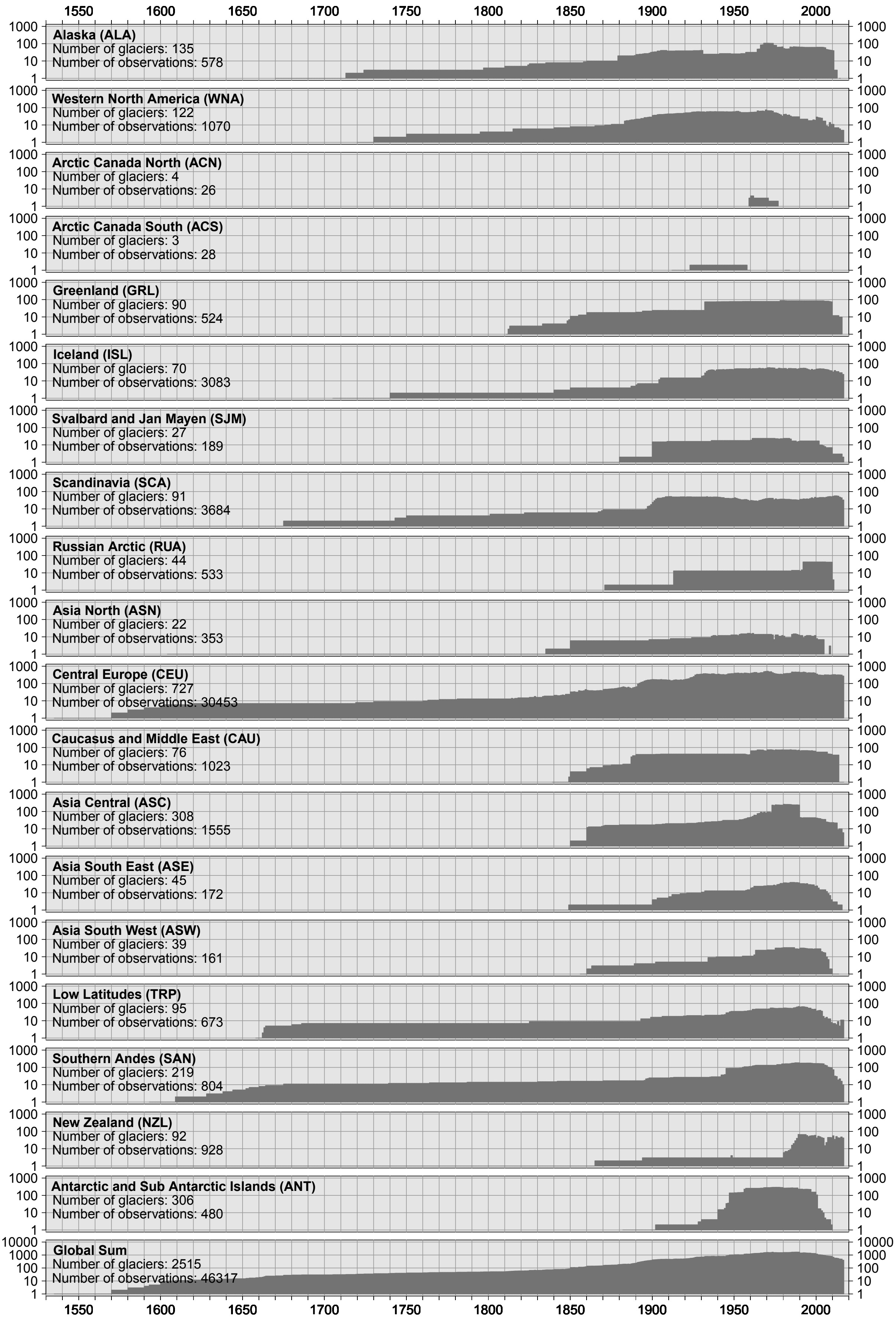


Figure 2.5 Regional and global number of glaciers with front-variation data from 1535–2017.

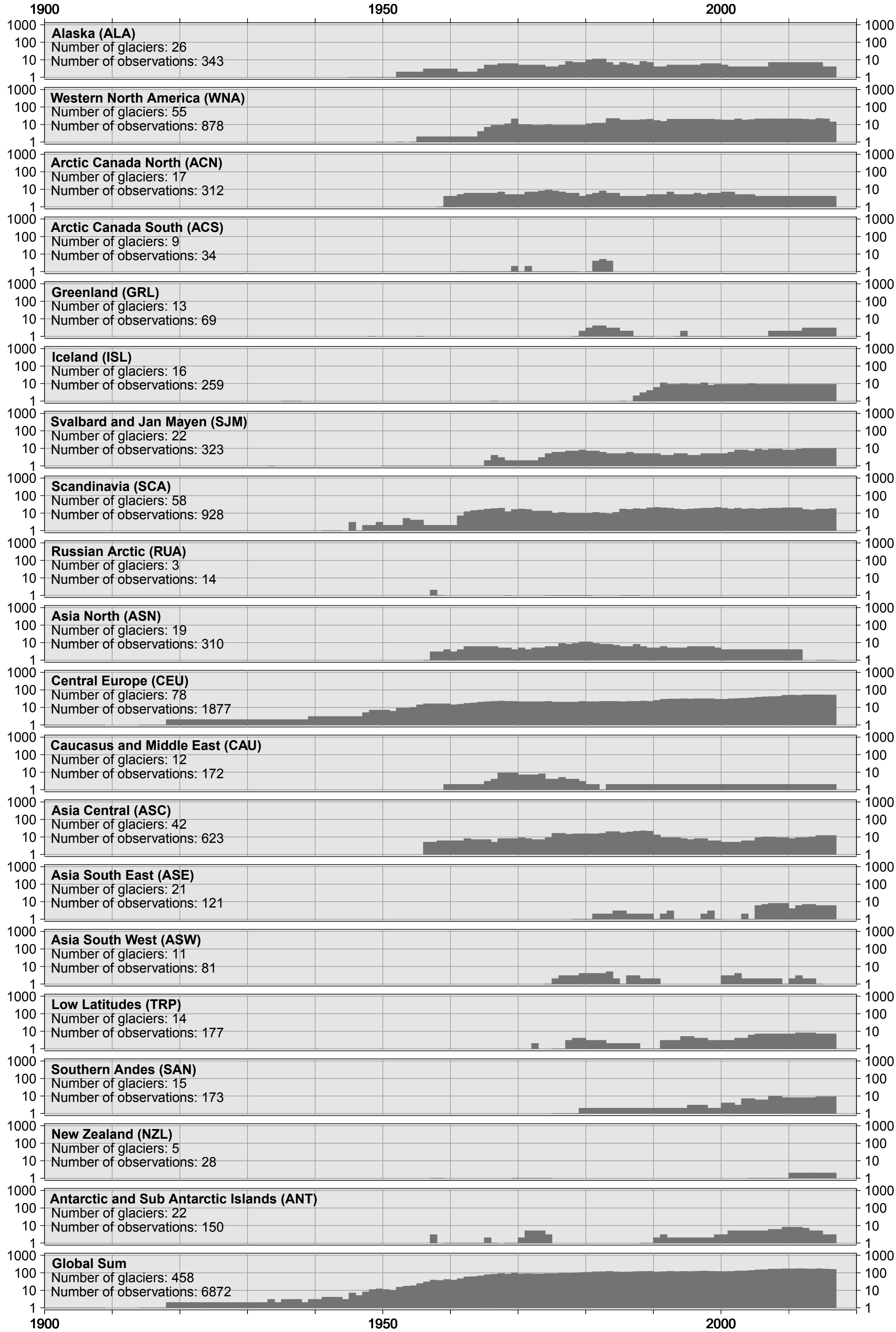


Figure 2.6 Regional and global number of glaciers with glaciological mass-balance data from 1900–2017.

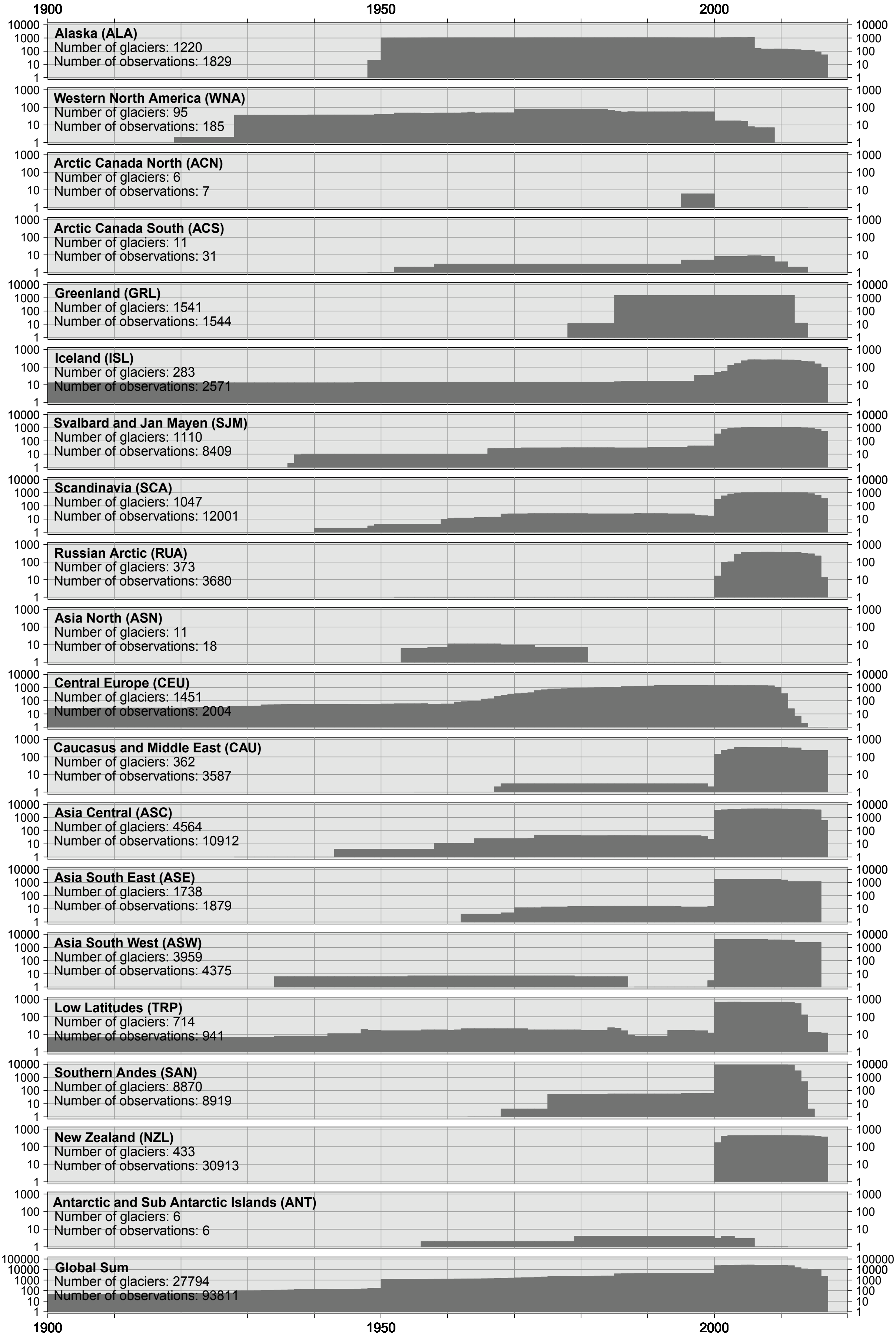


Figure 2.7 Regional and global number of glaciers with geodetic mass-change data from 1900–2017.

3 REGIONAL INFORMATION

Fluctuations of glaciers (not influenced by surge or calving dynamics) are recognized as high-confidence climate indicators and as an important element in early detection strategies within the international climate monitoring programmes (GCOS, 2010; GTOS, 2009). Their fluctuations can be analyzed on global and regional scales, but also on the local scale, where topographic effects may lead to different reactions of two adjacent glaciers (Kuhn et al., 1985). The sensitivity of a glacier to climatic change is strongly related to the climate regime in which the glacier resides. The mass balance of temperate glaciers in the mid-latitudes is mainly dependent on winter precipitation, summer temperature and summer snowfalls (temporally reducing the melt due to the increased albedo; Kuhn et al., 1999). In contrast, the glaciers in low latitudes, where ablation occurs throughout the year and multiple accumulation seasons exist, are strongly influenced by variations in the atmospheric moisture content which affects incoming solar radiation, precipitation and albedo, atmospheric long-wave emission, and sublimation (Wagnon et al., 2001; Kaser & Osmaston, 2002). In the Himalaya, which is influenced by the monsoon, most of the accumulation and ablation occurs during the summer (Ageta & Fujita, 1996; Fujita & Ageta, 2000). Glaciers at high altitudes and in polar regions can experience accumulation in any season (Chinn, 1985). The challenges of fieldwork in these different regions and climate regimes are summarized and contrasted by Stumm et al. (2017).

For regional analysis and comparison of glacier fluctuation data, it is convenient to group glaciers by proximity. We refer to the glacier regions as jointly defined by the GTN-G Advisory Board, GLIMS, the Randolph Glacier Inventory Working Group of IACS, and the WGMS (GTN-G, 2017). For global studies of mass balance, these glacier regions seem to be appropriate because of their manageable number and their geographical extent, which is close to the spatial correlation distance of glacier mass-balance variability in most regions (several hundred kilometres; cf. Letreguilly & Reynaud, 1990; Cogley & Adams, 1998). For every region, all data records are aggregated at the annual time resolution to give consideration to the corresponding observational peculiarities, i.e., for multi-annual survey periods, the annual change rate is calculated and assigned to each year of the survey period. For quantitative comparisons over time and between regions, decadal arithmetic mean mass balances are calculated to reduce the influence of meteorological extremes and of density conversion issues (cf. Huss, 2013). Global values are calculated as arithmetic means of the regional averages to avoid a bias in favour of regions with large observation densities (e.g. in Central Europe, Scandinavia, or Svalbard). This approach is suitable for assessing the temporal variability of glacier mass balance (Zemp et al., 2015).

This chapter provides regional overviews including a figure showing regional averages of glaciological and geodetic mass balances. Glaciological observations were reported by the Principal Investigators or compiled from the literature (e.g. Cogley, 2009; Dyurgerov & Meier, 2005). Geodetic data were compiled from global (Zemp et al., 2019a) and regional assessments (as cited in the following sections) and integrated into the Fluctuations of Glaciers database with the support of corresponding researchers. Additional data were compiled from the literature. These geodetic results are shown together with the corresponding number of observations, key statistics on regional glacier distribution and available fluctuation series, as well as graphs of cumulative front variation and mass balance from selected glaciers with long-term observation series. Note that for cumulative graphs with observational gaps the absolute change over the full time period is unknown. The regions are ordered approximately from West to East and from North to South. Regional estimates of total glacier area, rounded out to the next 500 km^2 mark, are from the RGI 6.0 (RGI Consortium, 2017).

3.1 ALASKA

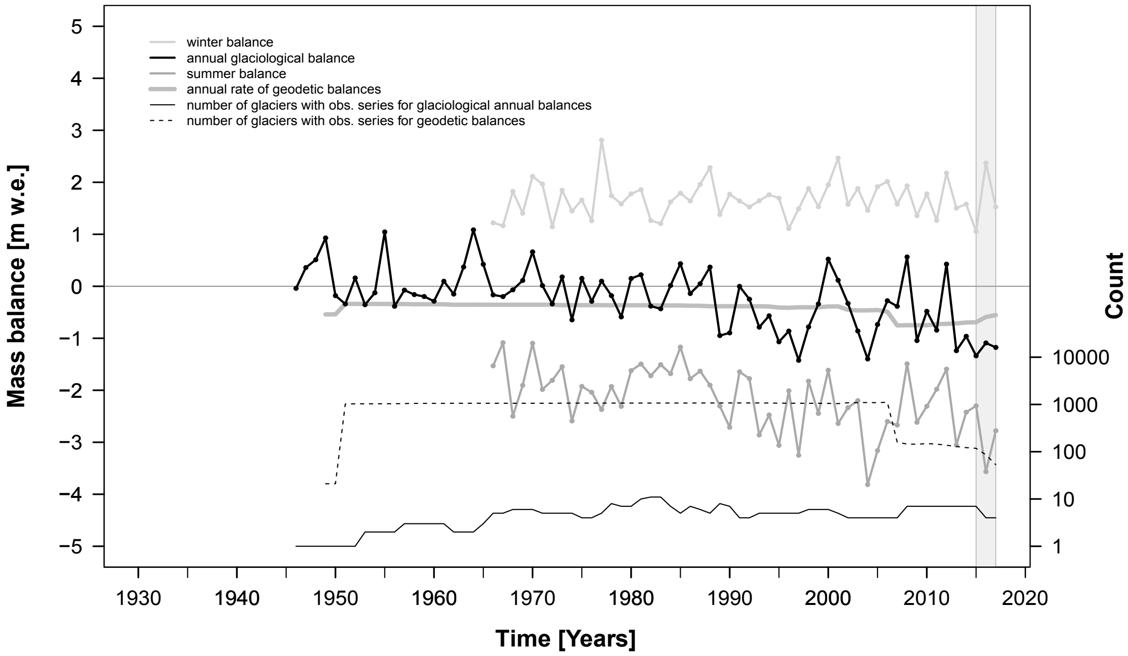


Figure 3.1.1 Regional mass balances: Annual glaciological balances (m w.e.) and annual rates of geodetic balances (m w.e. a^{-1}) are shown together with the corresponding number of glaciers with observations. Geodetic balances were calculated assuming a glacier-wide average density of 850 kg m^{-3}.

The glaciers and icefields of Alaska are located in the Brooks Range, the Alaska Range, where Mount McKinley/Denali (the highest peak of the continent) is located, and in the Coast Mountains along the Gulf of Alaska coastline. Together these glaciers cover an area of about 86,500 km^2. Climate conditions in this region range from very maritime conditions in the Coast Mountains to continental conditions in the Alaska Range. In Alaska, the major part of the front-variation series was discontinued at the end of the 20th century. Long-term mass-balance measurements have been reported from Gulkana and Wolverine in the Alaska Range as well as from the Juneau Icefield's Taku and Lemon Creek glaciers located in southeast Alaska.

In Alaska, glaciers reached their Little Ice Age (LIA) maxima at various times; for the northeast Brooks Range it was the late 15th century, and for the Kenai Mountains, the mid-17th century (Grove, 2004). However, most of the glaciers attained the LIA maximum extent between the early 18th and late 19th centuries (Molnia, 2007). Reported front-variation observations show a general glacier retreat from the LIA extents. Exceptions to this general trend are large tidewater glaciers with impressive frontal retreat (e.g. Columbia No 627) and advance (e.g. Harvard, Taku) cycles, mainly driven by calving dynamics. The former tidewater glacier Muir, located in the Saint Elias Mountains, became a land-terminating glacier after its last retreat phase. Observed mass-balance glaciers lost about half a metre w.e. per year during the 1990s and 2000s, with four years of positive mean balances in 1999/00, 2000/01, 2007/08, and 2011/12. Seasonal balance observations show the large mass turnover of the maritime glaciers. In 2015/16 the reported balance was negative with –1090 mm w.e. a^{-1} followed by a similar negative balance of –1176 mm w.e. a^{-1} in 2016/17. The glaciological measurements are supported by results from geodetic surveys from about 1,200 glaciers between the 1950s and the 2000s. Regional glacier change assessments were recently published by Arendt et al. (2006), Larsen et al. (2015), Le Bris & Paul (2015), McNabb & Hock (2014), O'Neel et al. (2019), and Pelto et al. (2013).

Estimated total glacier area (km^2):	86,500
Front variations	
- # of series*:	136/0
- # of obs. from stat. or adv. glaciers*:	212/0
- # of obs. from retreating glaciers*:	381/0
Glaciological balances	
- # of series*:	26/4
- # of observations*:	345/8
Geodetic balances	
- # of series°:	1,220/151
- # of observations°:	1,829/525

* (total/2016 & 2017), ° (total/>2007)

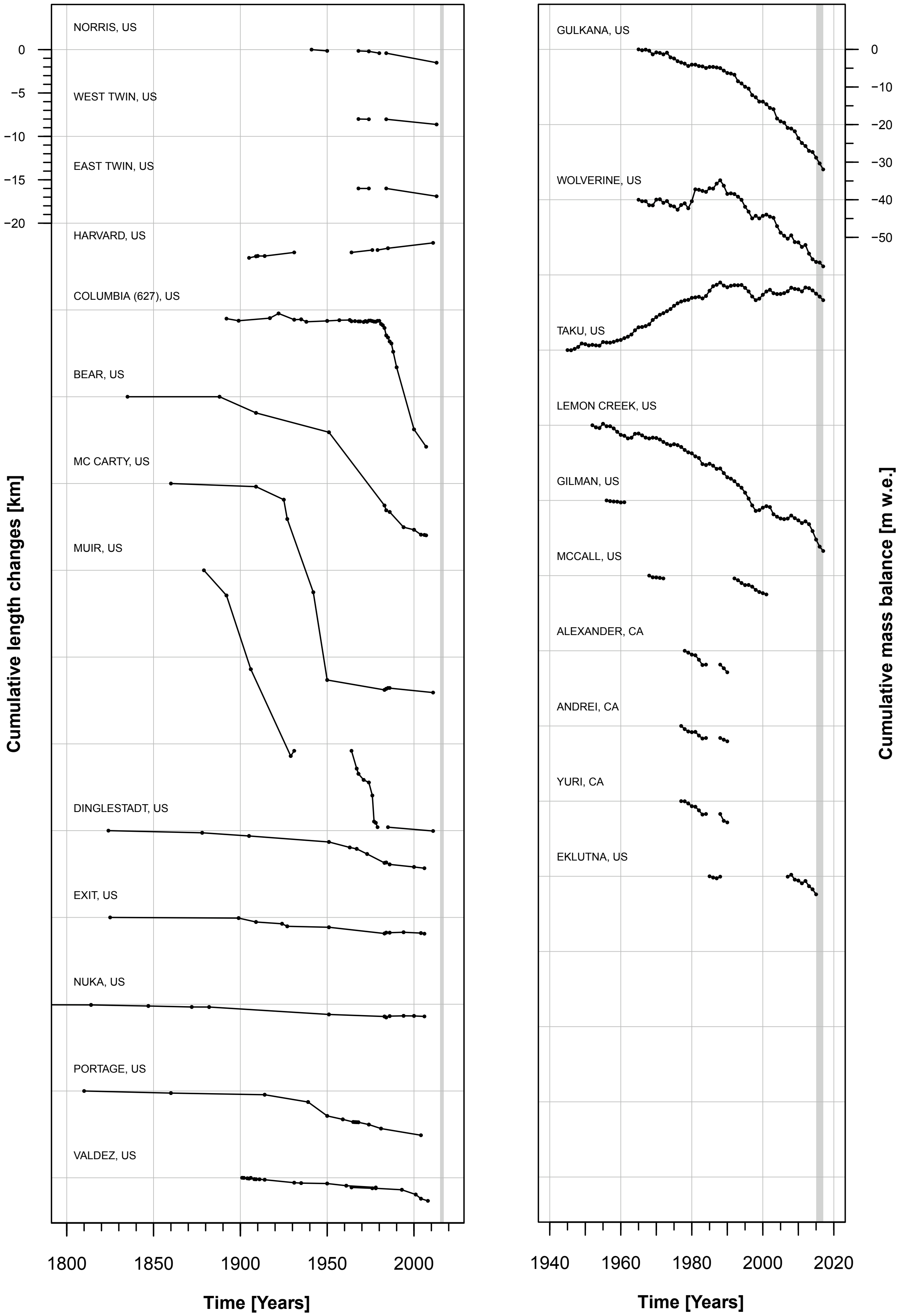


Figure 3.1.2 Cumulative length changes (left) and cumulative mass balances (right) of selected glaciers in Alaska over the entire observation period.

3.2 WESTERN NORTH AMERICA

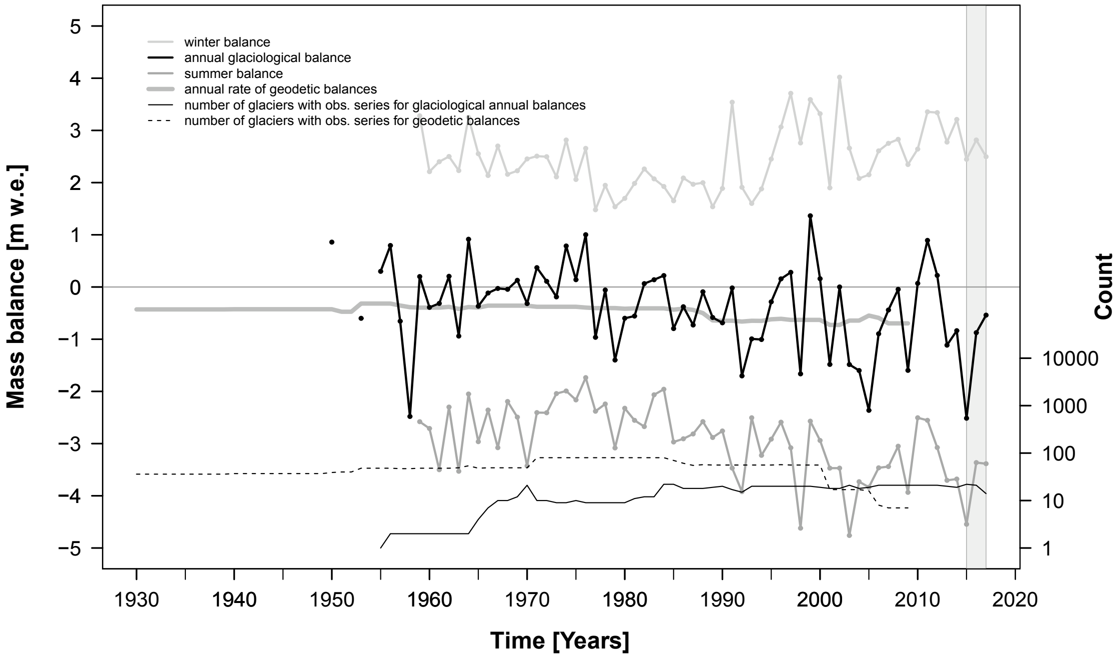


Figure 3.2.1 Regional mass balances: Annual glaciological balances (m w.e.) and annual rates of geodetic balances (m w.e. a^{-1}) are shown together with the corresponding number of glaciers with observations. Geodetic balances were calculated assuming a glacier-wide average density of 850 kg m^{-3}.

The glaciers in Western North America are located in the Pacific Coast Mountains, the Rocky Mountains, the Cascade Range, and in the Sierre Nevada. Together, the glacier area covers a total of approx. 14,500 km^2. In general, the climate of the mountain ranges shows strong variations depending on latitude, altitude and proximity to the sea. Therefore, glaciers in the south are much smaller and occur at higher elevations than in the higher latitudes, where some glaciers extend down to the coast.

From western North America more than 50 mass balance and more than 120 front-variation series are available but only half of them have been continued into the 21st century. South Cascade Glacier in the Cascade Range has the longest mass-balance record followed by Place and Helm glaciers in the Coast Mountains and Peyto Glacier in the Rocky Mountains. In conterminous USA and Canada, glaciers reached their LIA maximum extent in the mid to late 19th century (Kaufmann et al., 2004). Reported front variations show a general glacier retreat from the LIA extents with intermittent periods of glacier re-advances in the early 20th century and from the 1970s to 1980s. Since the 1990s glacier retreat has been continued.

Mean annual balance rates of the observed glaciers were between 400 and 450 mm w.e. a^{-1} in the 1980s and 1990s, and almost –1000 mm w.e. a^{-1} in the 2000s. Seasonal balance observations show the large mass turnover of the maritime glaciers. The reported mean annual balance of 2015/16 was negative with –875 mm w.e. followed by a less negative mean annual balance of –539 mm w.e. in 2016/17. The glaciological observations are well supported by results from the limited sample of geodetic surveys.

Regional glacier change assessments were recently published by Pelto (2018), Pelto & Brown (2012), Shea et al. (2013), Tennant & Menounos (2013), and Tennant et al. (2012).

Estimated total glacier area (km^2):	14,500
Front variations	
- # of series*:	122/5
- # of obs. from stat. or adv. glaciers*:	284/0
- # of obs. from retreating glaciers*:	795/10
Glaciological balances	
- # of series*:	55/21
- # of observations*:	887/35
Geodetic balances	
- # of series°:	95/7
- # of observations°:	185/8

* (total/2016 & 2017), ° (total/>2007)

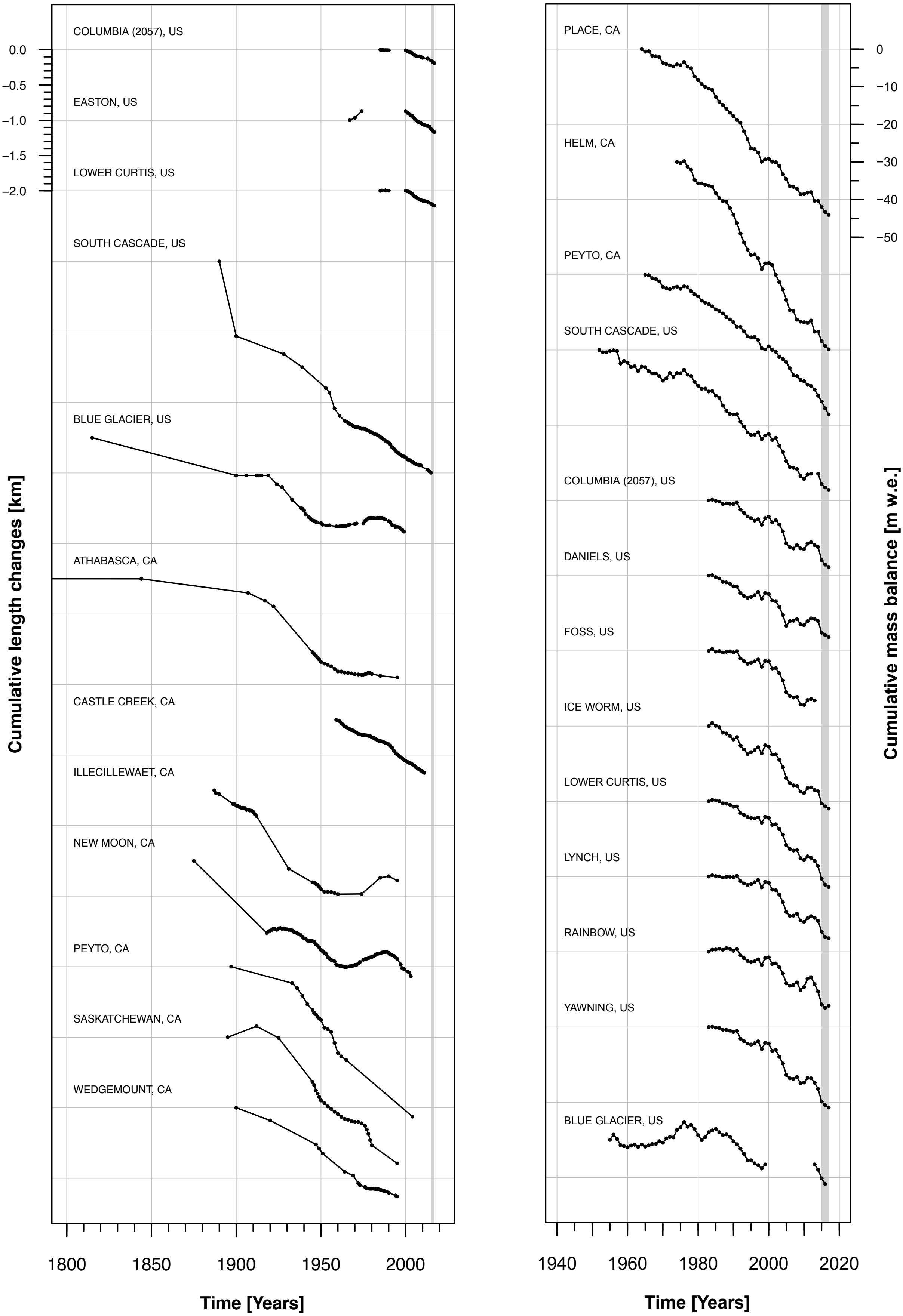


Figure 3.2.2 Cumulative length changes (left) and cumulative mass balances (right) of selected glaciers in Western North America over the entire observation period.

3.3 ARCTIC CANADA NORTH & SOUTH

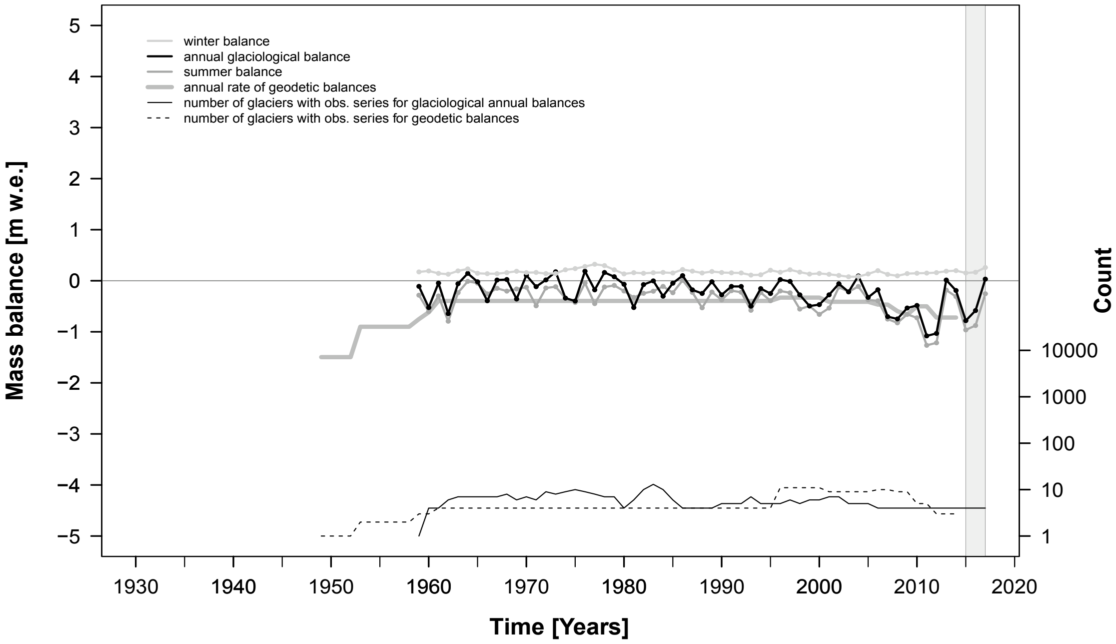


Figure 3.3.1 Regional mass balances: Annual glaciological balances (m w.e.) and annual rates of geodetic balances (m w.e. a^{-1}) are shown together with the corresponding number of glaciers with observations. Geodetic balances were calculated assuming a glacier-wide average density of 850 kg m^{-3}.

The Canadian Arctic Archipelago is a group of more than 36,000 islands and hosts a total of about 146,000 km^2 of glaciers, icefields and ice caps. The largest islands with glaciers are Baffin, Ellesmere, Devon, Axel Heiberg, and Melville. The glaciers in this high-latitude region are much influenced by the extent and distribution of sea ice which in turn depends on ocean currents and on the Arctic and North Atlantic Oscillations.

Information on glacier changes mainly stems from a few dozen mass-balance series. The longest continuous measurements are reported from Meighen, Devon and Melville Ice Caps and from White Glacier. The long-term glaciological measurement series of White Glacier has recently been homogenized and validated with geodetic surveys by Thomson et al. (2017).

The timing of the LIA maximum extent of glaciers in the Canadian Artic Archipelago is estimated to the end of the 19th century (Grove, 2004). The subsequent glacier retreat is clearly visible in remotely sensed images thanks to glacier moraines and trimlines. However, detailed front-variation observations are not available for this region.

The few reported mass-balance measurements indicate slightly negative balances of less than 100 mm w.e. a^{-1} between the 1960s and the 1980s and an increased mass loss between –200 and –300 mm w.e. a^{-1} in the 1990s and 2000s. Seasonal balances show the small mass turnover of the Arctic ice caps. In Arctic Canada North, the reported mean annual balance of 2015/16 was negative with –584 mm w.e. and slightly positive with 32 mm w.e. in 2016/17.

The few available results from geodetic surveys are also indicating negative balances over the second half of the 20th century but relate to a different glacier sample.

Estimated total glacier area (km^2):	146,000
Front variations	
- # of series*:	7/0
- # of obs. from stat. or adv. glaciers*:	17/0
- # of obs. from retreating glaciers*:	37/0
Glaciological balances	
- # of series*:	26/4
- # of observations*:	346/8
Geodetic balances	
- # of series°:	17/9
- # of observations°:	38/24
* (total/2016 & 2017), ° (total/>2007)	

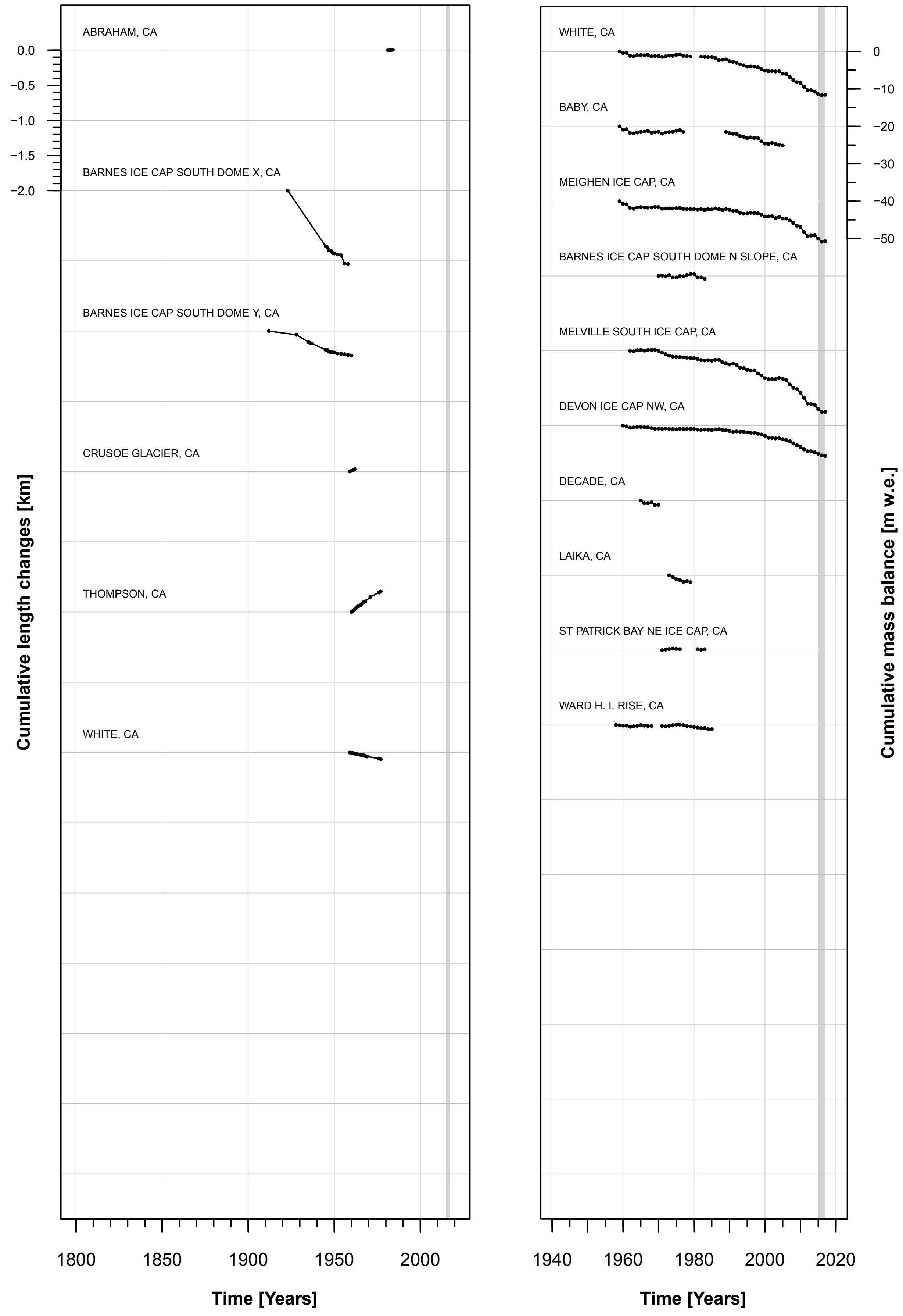


Figure 3.3.2 Cumulative length changes (left) and cumulative mass balances (right) of selected glaciers in Arctic Canada over the entire observation period.

3.4 GREENLAND

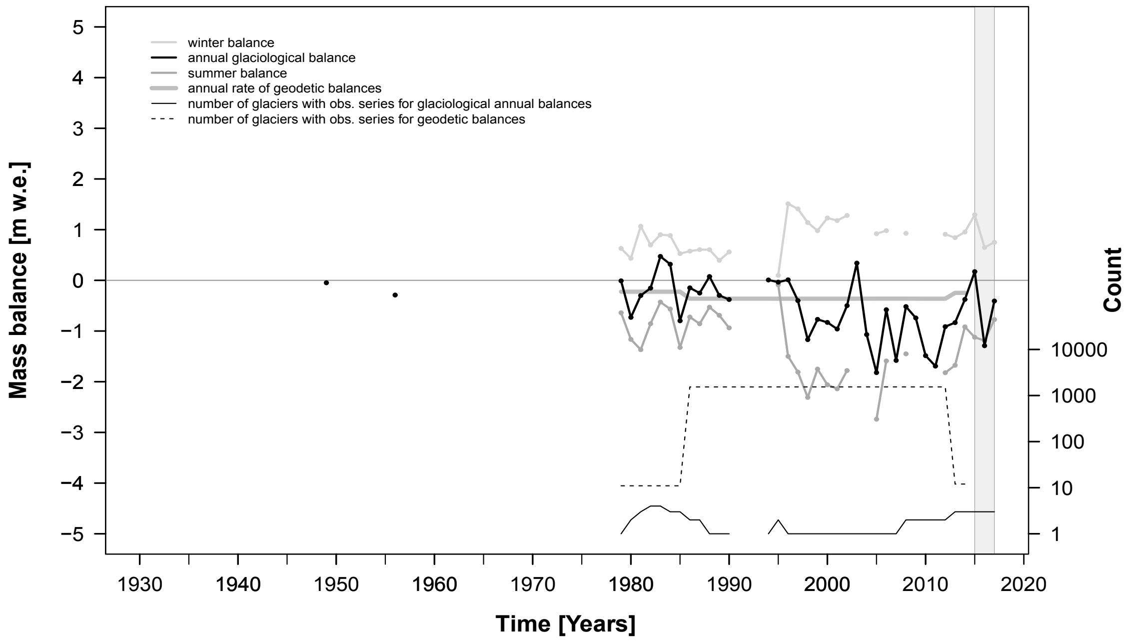


Figure 3.4.1 Regional mass balances: Annual glaciological balances (m w.e.) and annual rates of geodetic balances (m w.e. a^{-1}) are shown together with the corresponding number of glaciers with observations. Geodetic balances were calculated assuming a glacier-wide average density of 850 kg m^{-3}.

The world's largest non-continental island is covered to about 80% by the Greenland Ice Sheet. In addition, about 20,300 local glaciers cover an area between 90,000 km^2 and 130,000 km^2, depending on the counting of different connectivity levels between local glaciers and the ice sheet (Rastner et al., 2012). These glaciers range from sea level to 3,694 m a.s.l. at Gunnbjørn Fjeld – Greenland's highest mountain located in the Watkins Range on the east coast.

There exists a large variety of glacier types, from icefields and ice caps with numerous outlet glaciers, to valley, mountain and cirque glaciers. The island acts as a centre of cooling resulting in a polar to subpolar climate regime. Due to the large north-south extent, different thermal regimes can be expected for the glaciers, ranging from mostly cold in the north to polythermal in the central part to temperate in the south. About 80 front-variation series are available from the southern part. Mass-balance measurements are available from about 25 sites, but most series are discontinued after a couple of years. Recent measurements are reported from Mittivakkat and Freya, both located on the east coast and Qasigiannguit on the west coast. The few investigations from Greenland indicate that many glaciers and ice caps (e.g. on Disko Island) reached their maximum extents before the 19th century. The subsequent glacier retreat is documented at about decadal intervals for approx. 80 glaciers in the southern part of Greenland. However, observations made after 2010 have been reported only from Mittivakkat Glacier.

Mass-balance measurements indicate that the ice loss increased from –630 mm w.e. a^{-1} in the 1990s to –890 mm w.e. a^{-1} in the 2000s. The reported mean annual balance of 2015/16 was very negative with –1290 mm w.e. and less negative with –408 mm w.e. for 2016/17.

Regional glacier change assessments were recently published by Bjørk et al. (2012), Bolch et al. (2013), Citterio et al. (2009), and Machguth et al. (2016). Huber et al. (2020) show a geodetic mass-change of –0.5 m a^{-1} for west-central Greenland from 1985 to 2012.

Estimated total glacier area (km^2):	89,500
Front variations	
- # of series*:	89/10
- # of obs. from stat. or adv. glaciers*:	119/3
- # of obs. from retreating glaciers*:	394/7
Glaciological balances	
- # of series*:	13/3
- # of observations*:	70/6
Geodetic balances	
- # of series°:	1,541/1,541
- # of observations°:	1,544/1,544

* (total/2016 & 2017), ° (total/>2007)

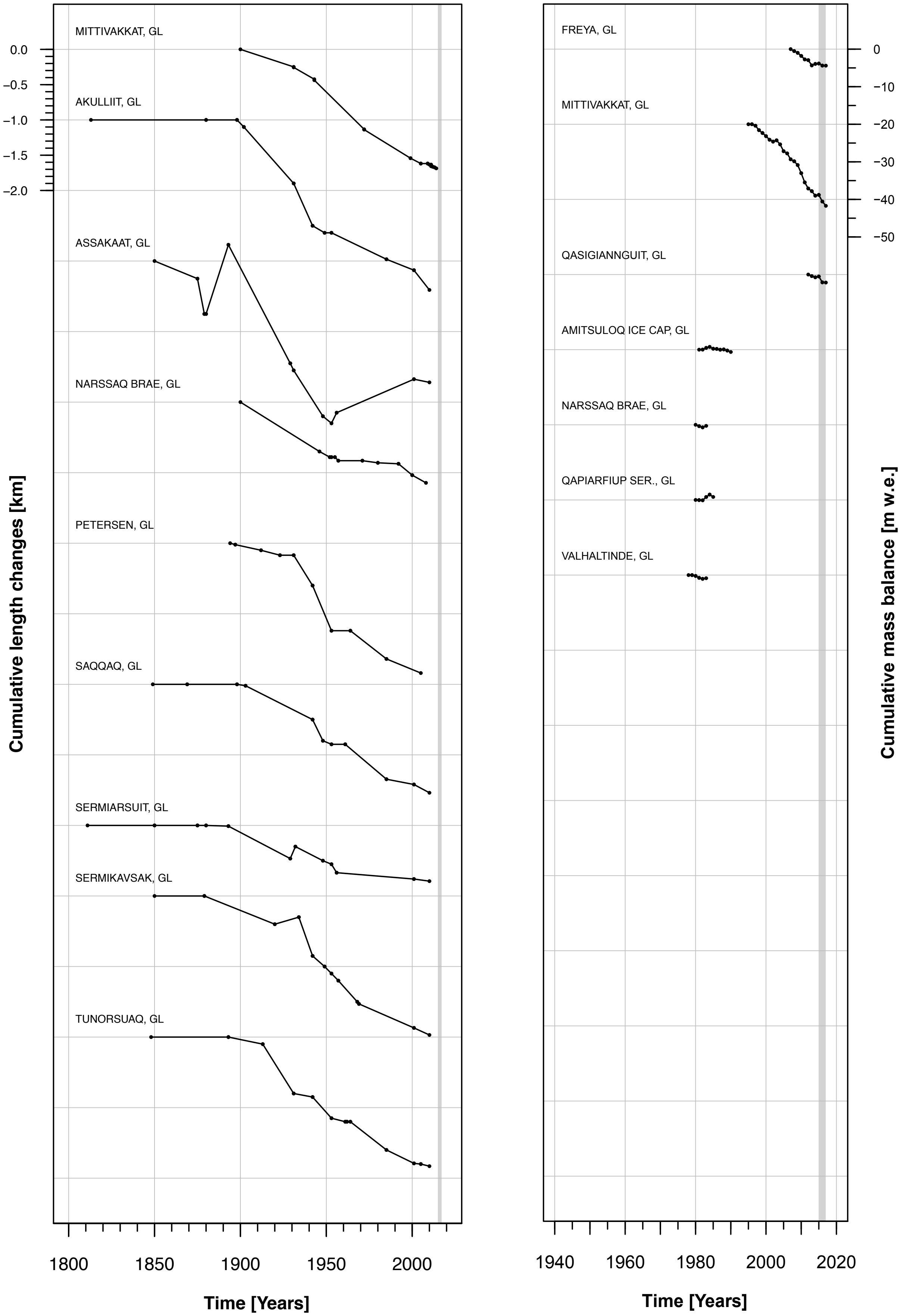


Figure 3.4.2 Cumulative length changes (left) and cumulative mass balances (right) of selected glaciers in Greenland over the entire observation period.

3.5 ICELAND

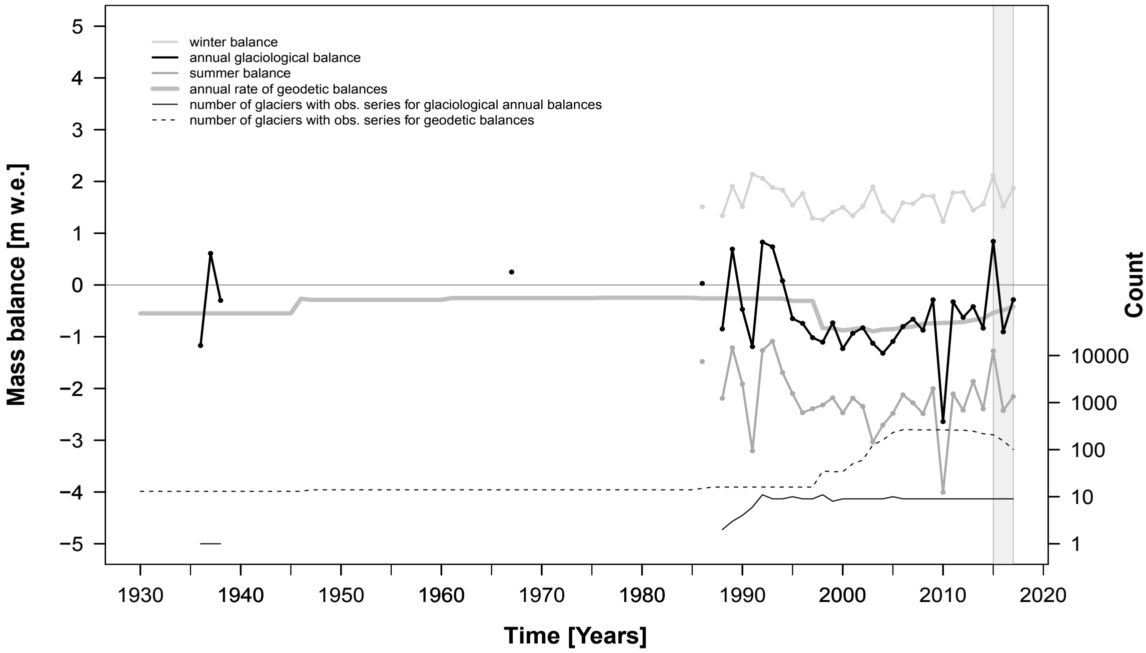


Figure 3.5.1 Regional mass balances: Annual glaciological balances (m w.e.) and annual rates of geodetic balances (m w.e. a^{-1}) are shown together with the corresponding number of glaciers with observations. Geodetic balances were calculated assuming a glacier-wide average density of 850 kg m^{-3}.

Iceland is located on the Mid-Atlantic Ridge and its ice cover is dominated by six large ice caps. Vatnajökull is the largest followed by Langjökull, Hofsjökull, Mýrdalsjökull, Drangajökull, and Eyjafjallajökull. The entire glacier cover is estimated to total close to 11,000 km^2.

The glaciers in Iceland are located in a region of subpolar oceanic climate. The warm North Atlantic Current ensures generally higher temperatures than in most places of similar latitude. Winter precipitation and summer ablation levels on the glaciers are comparatively high and the mass-balance sensitivity is among the highest recorded. Many ice caps and glaciers in Iceland are influenced by geothermal and volcanic activity, resulting in frequent glacier outburst floods, known in Icelandic as jökulhlaups.

Mass-balance measurements are available from a dozen glaciers. The longest series starting in 1988 is from outlet glaciers of Hofsjökull. Measurements on Vatnajökull outlets and on Langjökull were started in 1991 and 1997, respectively. Detailed front-variation series are available from over 70 glacier tongues reaching back to the 1930s, with sporadic information derived from historical sources back to the 18th century and in a few cases even further back in time.

The maximum LIA extent is estimated to have occurred close to the end of the 19th century (Thorarinsson, 1943; Sigurðsson, 2005). Detailed front-variation observations document the general retreat from the LIA maximum extent up to 1970, with a period of intermittent re-advance between 1970 and 1990 and continued retreat from 1995 to the present time. Abrupt re-advances are due to surges.

The average mass loss of glaciers has increased from about –500 mm w.e. a^{-1} in the 1990s to more than –1,000 mm w.e. a^{-1} in the 2000s. The average mass balance during the glaciological year 2015/16 was –905 mm w.e., which quite typical for the 20-year period of negative annual mass balance in the period 1995–2014. A less negative mass balance of –285 mm w.e. was measured in 2016/17. Regional glacier change assessments were recently published by Björnsson et al. (2013), Foresta et al. (2016), Hannesdottir et al. (2015), and Pope et al. (2016).

Estimated total glacier area (km^2):	11,000
Front variations	
- # of series*:	70/30
- # of obs. from stat. or adv. glaciers*:	783/8
- # of obs. from retreating glaciers*:	2,315/42
Glaciological balances	
- # of series*:	16/9
- # of observations*:	265/18
Geodetic balances	
- # of series°:	283/269
- # of observations°:	2,571/2,487

* (total/2016 & 2017), ° (total/>2007)

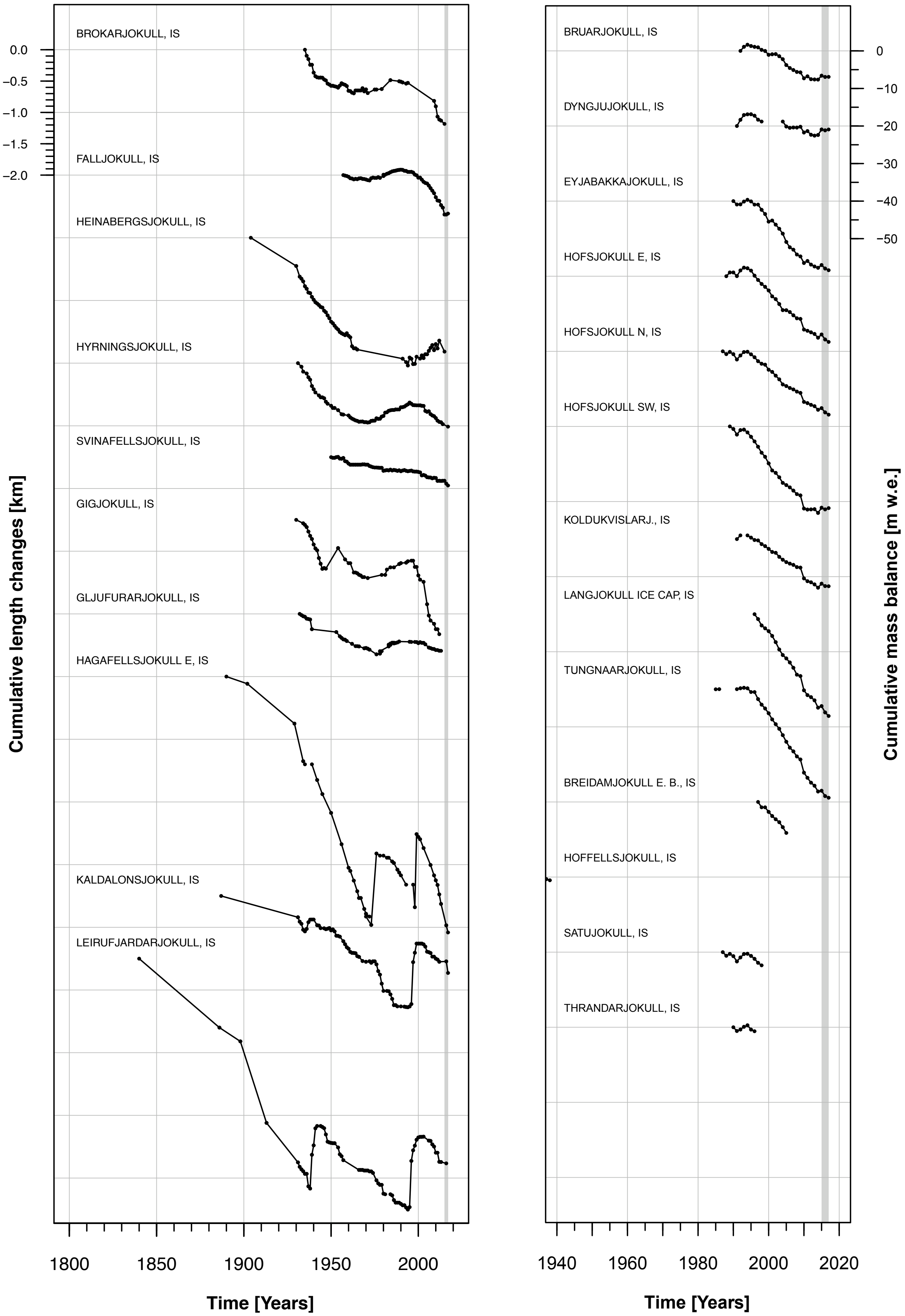


Figure 3.5.2 Cumulative length changes (left) and cumulative mass balances (right) of selected glaciers in Iceland over the entire observation period.

3.6 SVALBARD & JAN MAYEN

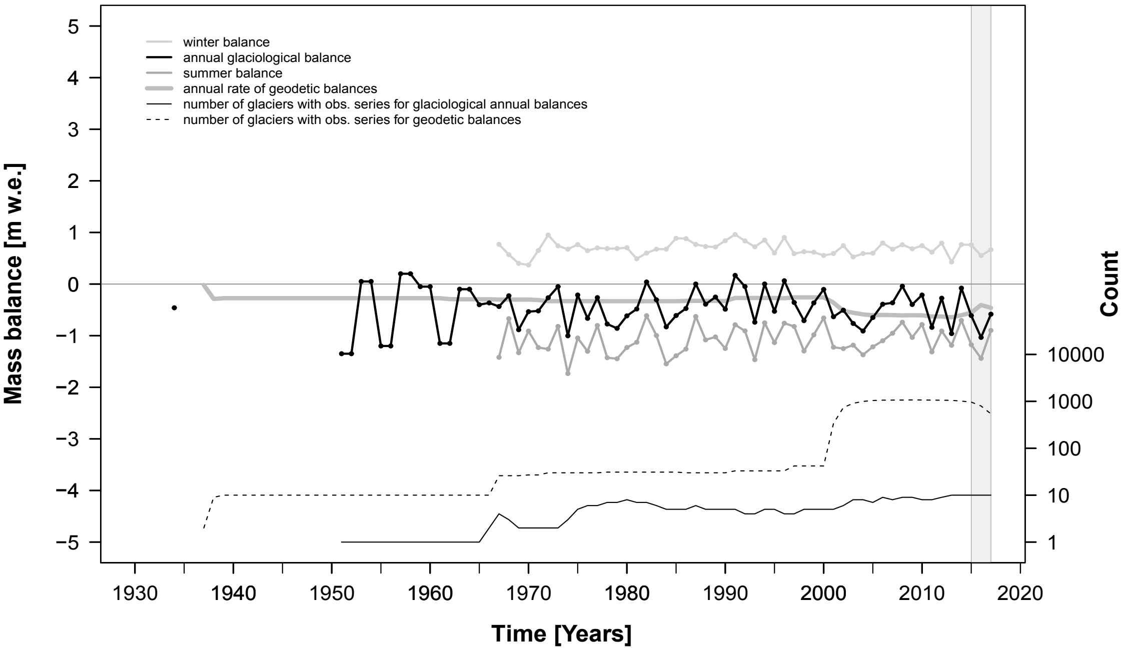


Figure 3.6.1 Regional mass balances: Annual glaciological balances (m w.e.) and annual rates of geodetic balances (m w.e. a^{-1}) are shown together with the corresponding number of glaciers with observations. Geodetic balances were calculated assuming a glacier-wide average density of 850 kg m^{-3}.

The Svalbard Archipelago is situated in the Arctic Ocean north of mainland Europe. The largest island is Spitsbergen, followed by Nordaustlandet and Edgeøya. Its topography is more than half covered by ice, and is characterized by plateau mountains and fjords. The entire glacier area totals about 34,000 km². Jan Mayen is a volcanic island in the Arctic Ocean and is part of the Kingdom of Norway, as is Svalbard. It is partly covered by glaciers, with an area of about 100 km² around the Beerenberg Volcano. Svalbard and Jan Mayen both have an arctic climate, although with much higher temperatures than other regions at the same latitude. Numerous glaciers on Svalbard are of the surge-type.

Over 20 continuous mass-balance series are reported from Svalbard, the longest ones being from Austre Brøggerbreen, Midtre Lovenbreen, Kongsvegen, Hansbreen, and Waldemarbreen. Front variations are available from roughly 30 glaciers, most of them dating back to about 1900. From Jan Mayen, front variations are reported from Sorbreen.

During the LIA, glaciers in Svalbard were close to their late Holocene maximum extent and remained there until the beginning of the 20th century (Svendsen & Magerud, 1997). The reported front-variation series show a general trend of retreat without a common period of distinct re-advances. On Jan Mayen, Sorbreen shows a retreat starting in the late 19th century with a re-advance period in the mid-20th century.

Glaciological mass-balance measurements indicate continued ice loss at a rate of a few hundred mm w.e. per year over the second half of the 20th century, well supported by results from geodetic survey of a few dozen glaciers. Mass loss increased to –490 mm w.e. a^{-1} in the 2000s. Seasonal balances show a relatively low mass turnover. The average mass balance of 2015/16 was –1,034 mm w.e. and –584 mm w.e. in 2016/17. Regional glacier change assessments were recently published by Sobota (2013).

Estimated total glacier area (km²):	34,000
Front variations	
- # of series*:	27/3
- # of obs. from stat. or adv. glaciers*:	33/0
- # of obs. from retreating glaciers*:	157/5
Glaciological balances	
- # of series*:	22/10
- # of observations*:	330/20
Geodetic balances	
- # of series°:	1,110/1,072
- # of observations°:	8,409/8,334

* (total/2016 & 2017), ° (total/>2007)

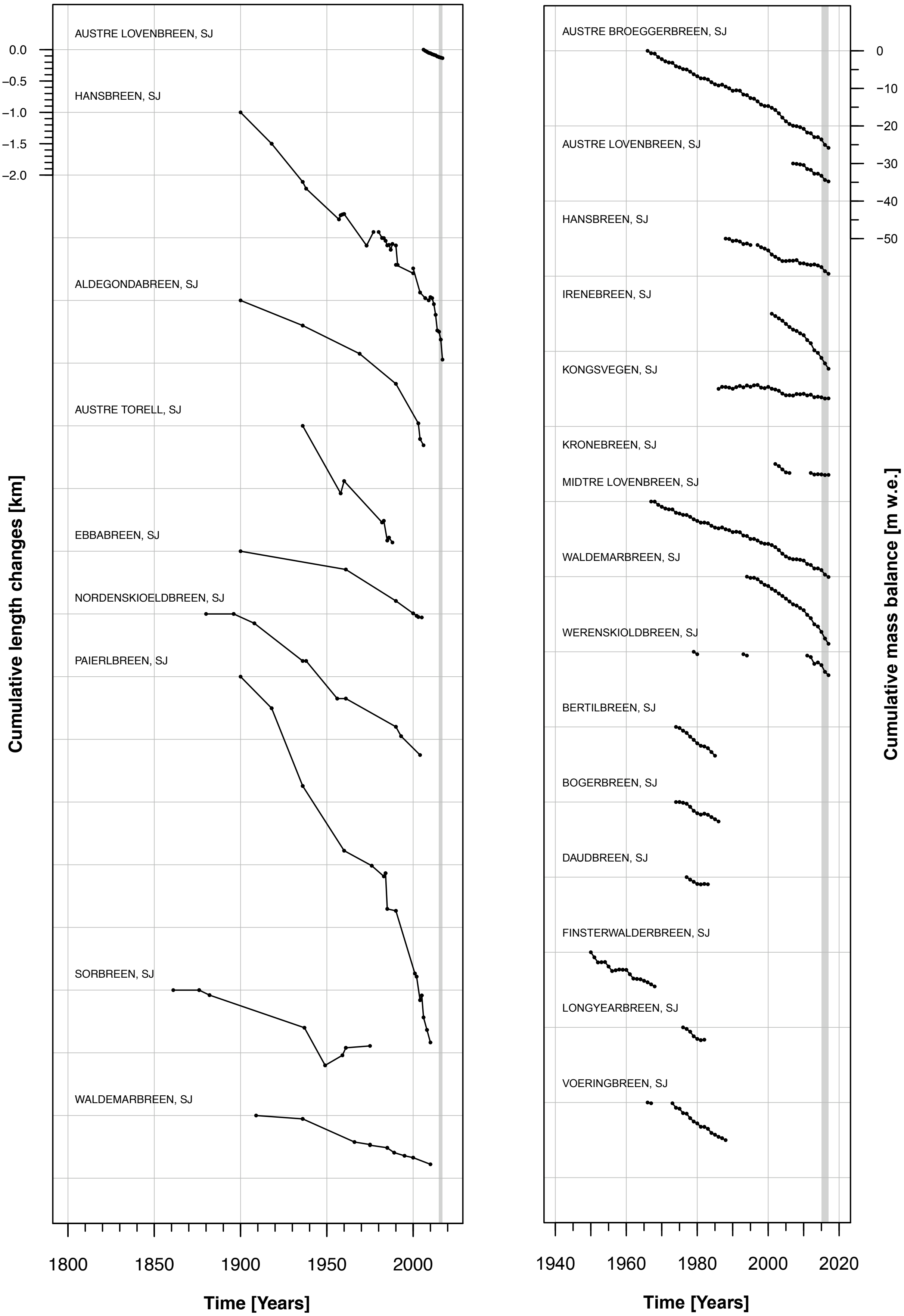


Figure 3.6.2 Cumulative length changes (left) and cumulative mass balances (right) of selected glaciers in Svalbard and Jan Mayen over the entire observation period.

3.7 SCANDINAVIA

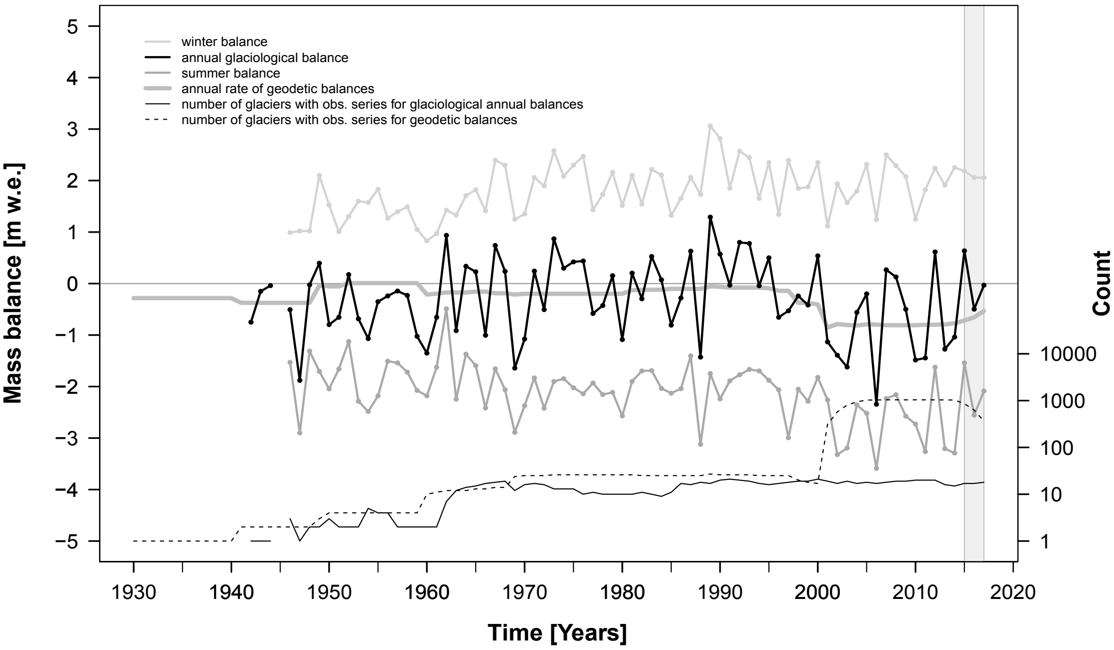


Figure 3.7.1 Regional mass balances: Annual glaciological balances (m w.e.) and annual rates of geodetic balances (m w.e. a^{-1}) are shown together with the corresponding number of glaciers with observations. Geodetic balances were calculated assuming a glacier-wide average density of 850 kg m^{-3}.

In Scandinavia, the greater part of the ice cover is concentrated in southern Norway, namely in Folgefonna, Hardangerjøkulen, Breheimen, Jotunheimen, and Jostedalsbreen, which is the largest ice cap of mainland Europe. In northern Norway there are the Okstindan and Svartisen ice caps, glaciers in Lyngen and Skjomen as well as in the adjacent Kebnekaise region in Sweden. Together, these glaciers cover about 3,000 km^2. Glaciers are situated in different climatic regimes, ranging from maritime along the Norwegian west coast, humid continental in the central part, to subarctic further north.

Scandinavia is one of the regions with the most and longest reported observation series. From the approx. 60 mass balance series, eight have continuously reported series since 1970; those in Norway have recently been reanalysed by Andreassen et al. (2016). Front-variations series are available from almost 90 glaciers extending back to the 19th century, with some reconstructions even back to the 17th century.

After having disappeared most likely during the early/mid-Holocene (Nesje et al., 2008), most of the Scandinavian glaciers reached their LIA maximum extent in the mid-18th century (Grove, 2004). Following a minor retreat trend with small frontal oscillations up until the late 19th century, the glaciers experienced a general recession during the 20th century with intermittent periods of re-advances around 1910 and 1930, in the 1970s, and around 1990; the last advance stopped at the beginning of the 21st century. On average, the observed mass balances were slightly positive from the 1970s to the 1990s. This was because coastal glaciers were able to gain mass while the glaciers further inland continued to lose mass. Geodetic results are well centred within the variability of the glaciological results with slightly negative average balances. After 2000, glaciers in both the coastal and the inland region lost mass resulting in an average balance of –790 mm w.e. a^{-1}. Seasonal balances show a large mass turnover. The regional average of reported balances was –497 mm w.e. in 2015/16 and almost balanced with –32 mm w.e. in 2016/17. Regional glacier change assessments were recently published by Andreassen et al. (2020), and NVE (2019, and earlier issues).

Estimated total glacier area (km^2):	3,000
Front variations	
- # of series*:	91/45
- # of obs. from stat. or adv. glaciers*:	743/12
- # of obs. from retreating glaciers*:	2,441/65
Glaciological balances	
- # of series*:	58/18
- # of observations*:	939/35
Geodetic balances	
- # of series°:	1,047/1,040
- # of observations°:	12,001/11,936

* (total/2016 & 2017), ° (total/>2007)

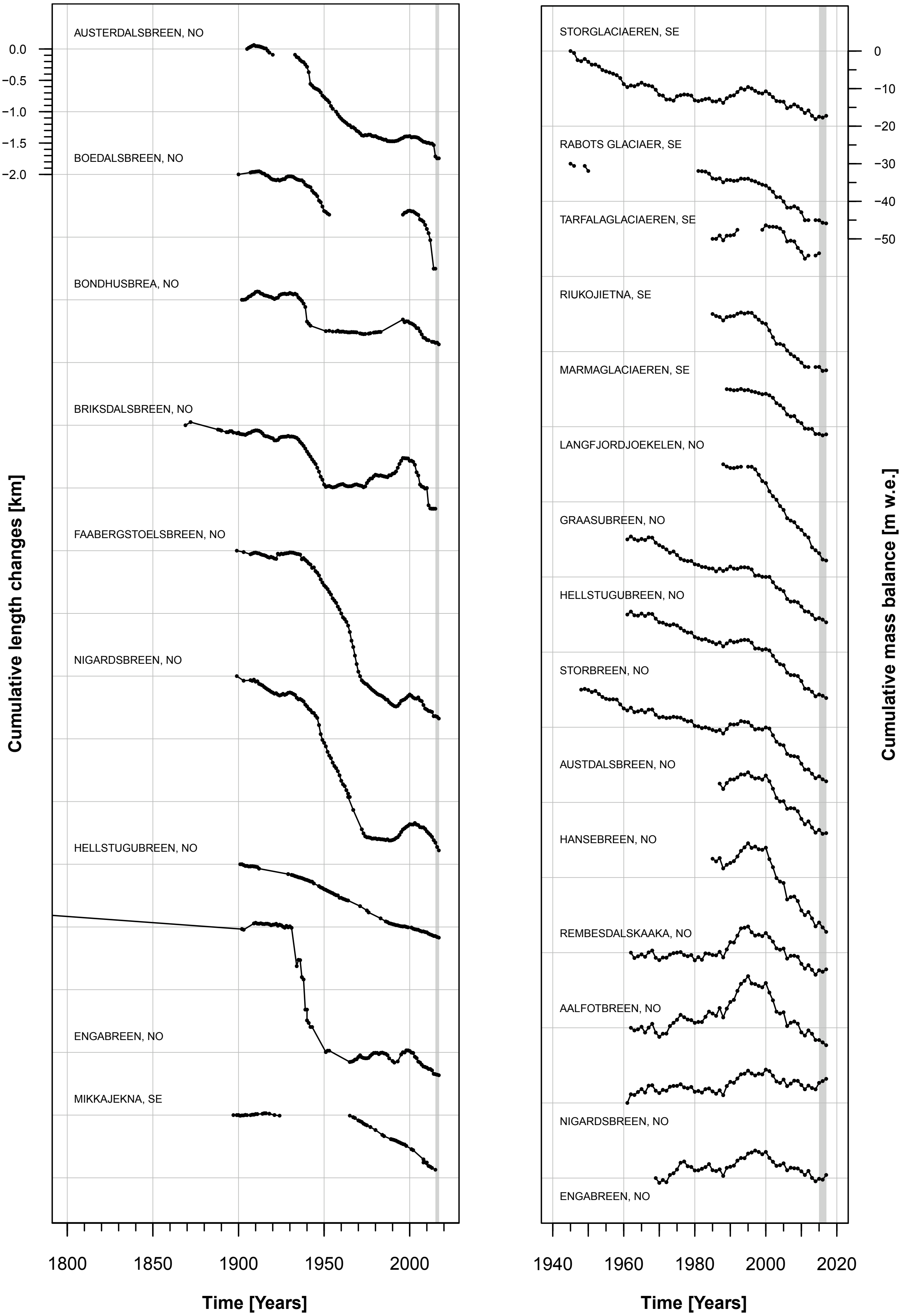


Figure 3.7.2 Cumulative length changes (left) and cumulative mass balances (right) of selected glaciers in Scandinavia over the entire observation period.

3.8 CENTRAL EUROPE

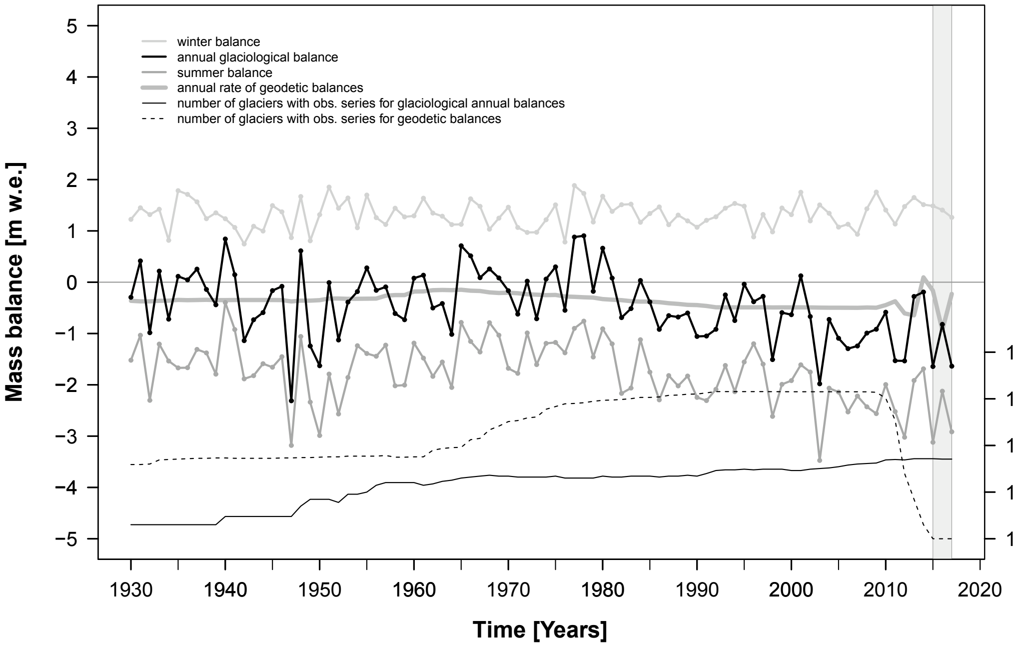


Figure 3.8.1 Regional mass balances: Annual glaciological balances (m w.e.) and annual rates of geodetic balances (m w.e. a^{-1}) are shown together with the corresponding number of glaciers with observations. Geodetic balances were calculated assuming a glacier-wide average density of 850 kg m^{-3}.

Central Europe has about 2,000 km² of glacier ice. The major part of it is located in the Alps with Grosser Aletschgletscher as its largest valley glacier. The Alps represent the 'water tower' of Europe and form the watershed of the Mediterranean Sea, the North Sea/North Atlantic Ocean, and the Black Sea. Some smaller glaciers are found in the Pyrenees – a mountain range in southwest Europe which extends from the Bay of Biscay to the Mediterranean Sea. The glaciers are situated in the Maladeta massif in Spain and around the Vignemale peak in France. A few more perennial icefields exist e.g., in the Apennine, Italy, as well as in Slovenia and Poland.

Central Europe has the greatest number of available front-variation and mass-balance measurements, with many long-term series. From the over 60 mass-balance series, ten have been maintained for more than 30 years. Over 700 front-variation series cover the entire Alps, many with more than 100 observation years. In addition, reconstructed front variations are available for a dozen glaciers extending back to the 16th century. About three dozen front-variation series are available from the Pyrenees range, some of them extending back to the 19th century. Mass-balance measurements have been carried out at Maladeta (ES) and Ossoue (FR) glaciers. In the Apennine, long-term measurements are available from Calderone (IT).

Front-variation observations give good documentation of the subsequent retreat with intermittent periods of re-advances in the 1890s, 1920s, and 1970–80s.

Glacier-mass loss accelerated from close to zero balances in the 1960s and 1970s, to –560/–720/–1,030 mm w.e. a^{-1} in the 1980s/1990s/2000s. Glaciological results are well supported by results from geodetic surveys, which provide data for all glaciers in Switzerland (Fischer et al., 2015), as well as other glaciers.

Seasonal balances show a relatively large mass turnover and a tendency towards more negative summer balances over the past decades. Regional mean balances were very negative with –822 mm w.e.) in 2015/16 and –1,637 mm w.e. in 2016/17. Regional glacier change assessments were recently published by Lieb & Kellerer-Pirklbauer (2019, and earlier issues), Huss et al. (2015), and GLAMOS (2018).

Estimated total glacier area (km²):	2,000
Front variations	
- # of series*:	738/318
- # of obs. from stat. or adv. glaciers*:	6,885/30
- # of obs. from retreating glaciers*:	22,930/533
Glaciological balances	
- # of series*:	78/52
- # of observations*:	1,914/102
Geodetic balances	
- # of series°:	1,451/1,414
- # of observations°:	2,004/1,464

* (total/2016 & 2017), ° (total/>2007)

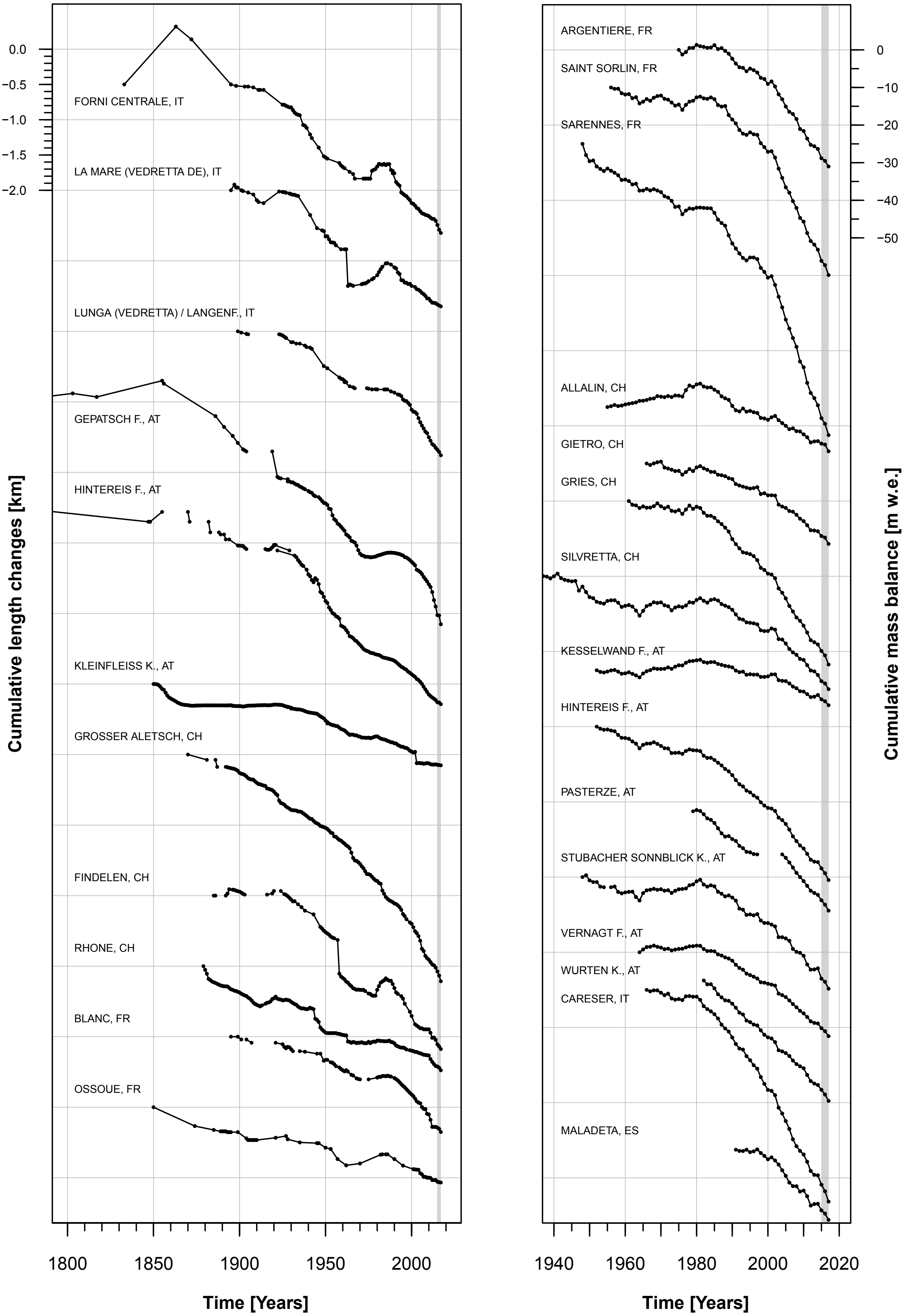


Figure 3.8.2 Cumulative length changes (left) and cumulative mass balances (right) of selected glaciers in Central Europe over the entire observation period.

3.9 CAUCASUS & MIDDLE EAST

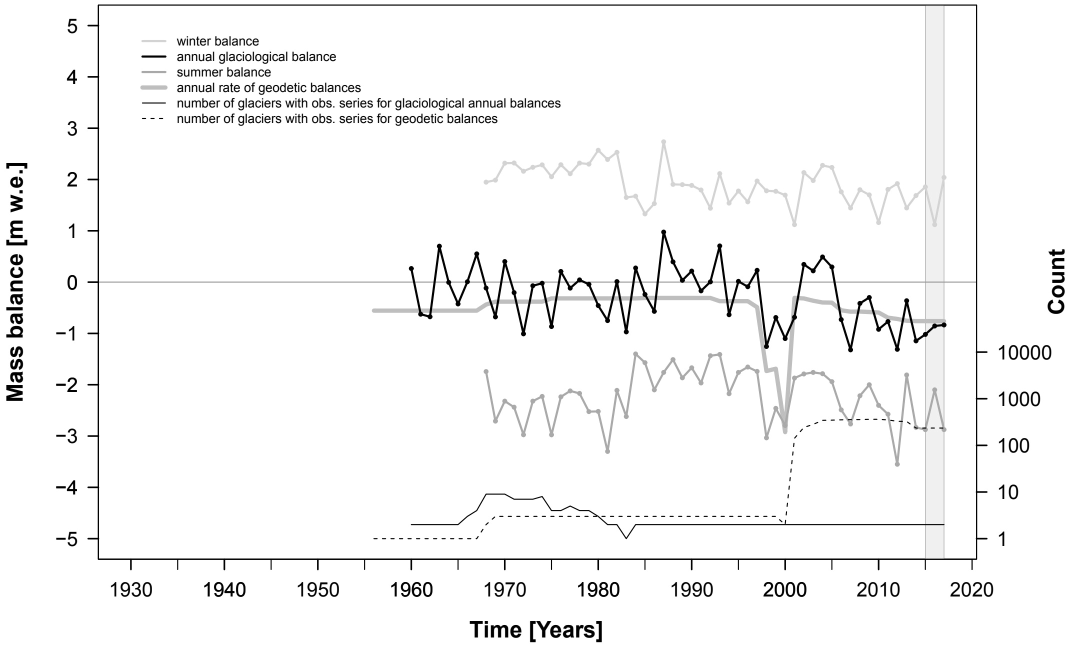


Figure 3.9.1 Regional mass balances: Annual glaciological balances (m w.e.) and annual rates of geodetic balances (m w.e. a^{-1}) are shown together with the corresponding number of glaciers with observations. Geodetic balances were calculated assuming a glacier-wide average density of 850 kg m^{-3}.

The Greater Caucasus mountain range contains over 2000 glaciers (Tielidze & Wheate, 2018), with total area of about 1500 km^2. This is about 96% of the contemporary glacier area of the Caucasus and Middle East glacier region. Most of the glaciers are located in the northern Caucasus, with Mount Elbrus (5,642 m a.s.l.) considered the highest peak in Europe. The climate of the Caucasus varies with elevation and latitude. The northern slopes are a few degrees colder than the southern slopes and precipitation increases from east to west in most regions. In the Middle East, small glaciers are found on Mount Erciyes in Central Anatolia, Turkey, as well as in the higher elevations of the Sabalan, Takhte-Soleiman, Damavand, Oshtorankuh, and Zardkuh regions in Iran.

Mass-balance measurements are reported from a dozen glaciers located in the Caucasus with ongoing long-term series at Djankuat and Garabashi (RU). Frontal variations of glaciers in the Caucasus as well as of Erciyes Glacier (TR) are well-documented throughout the 20th century. Geodetic measurements are available for only Djankuat and Alamkouh glaciers located in the Russian Caucasus and in the Takhte–Soleiman of Iran, respectively. In the Caucasus, glaciers reached their LIA maximum extents around 1850 (Grove, 2004). Glacier-front variations show a general trend of glacier retreat with intermittent re-advances around the 1980s. No further length-change measurements have been reported since 2010.

The few mass-balance measurement series indicate negative mean balances around –250 mm w.e. a^{-1} over the past decades, with a relatively large mass turnover. The negative peak in the geodetic results before 2000 is caused by the very small geodetic sample size, and an unfortunate mixture of the moderately negative values from the Caucasus glaciers with the strongly negative values from Alamkouh Glacier, Iran. The mean balances of Djankuat and Garabashi glaciers were –855 mm w.e. and –835 mm w.e. in 2015/16 and 2016/17, respectively.

Estimated total glacier area (km^2):	1,500
Front variations	
- # of series*:	76/1
- # of obs. from stat. or adv. glaciers*:	243/0
- # of obs. from retreating glaciers*:	781/2
Glaciological balances	
- # of series*:	12/2
- # of observations*:	174/4
Geodetic balances	
- # of series°:	362/362
- # of observations°:	3,587/3,578
* (total/2016 & 2017), ° (total/>2007)	

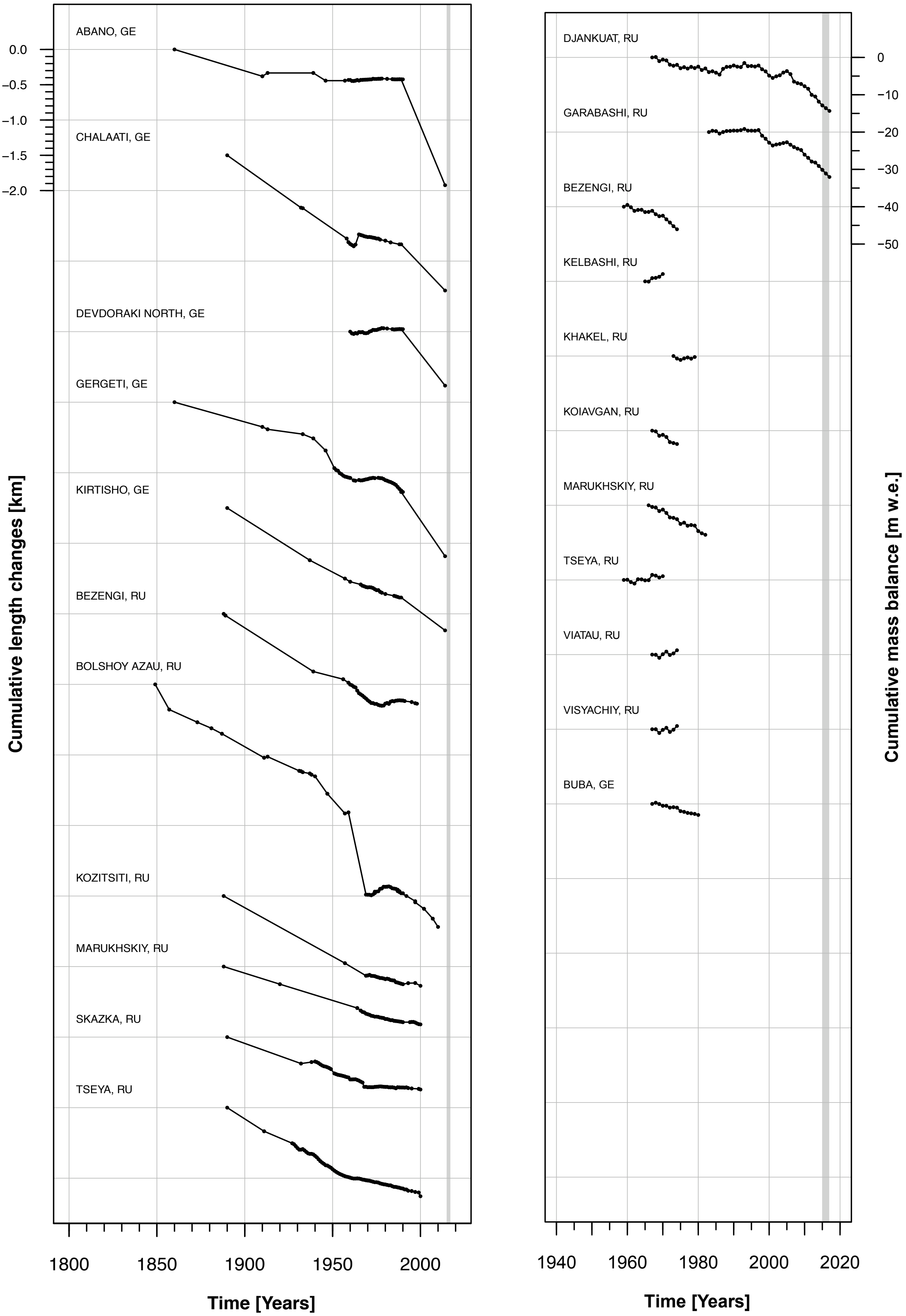


Figure 3.9.2 Cumulative length changes (left) and cumulative mass balances (right) of selected glaciers in Caucasus and Middle East over the entire observation period.

3.10 RUSSIAN ARCTIC

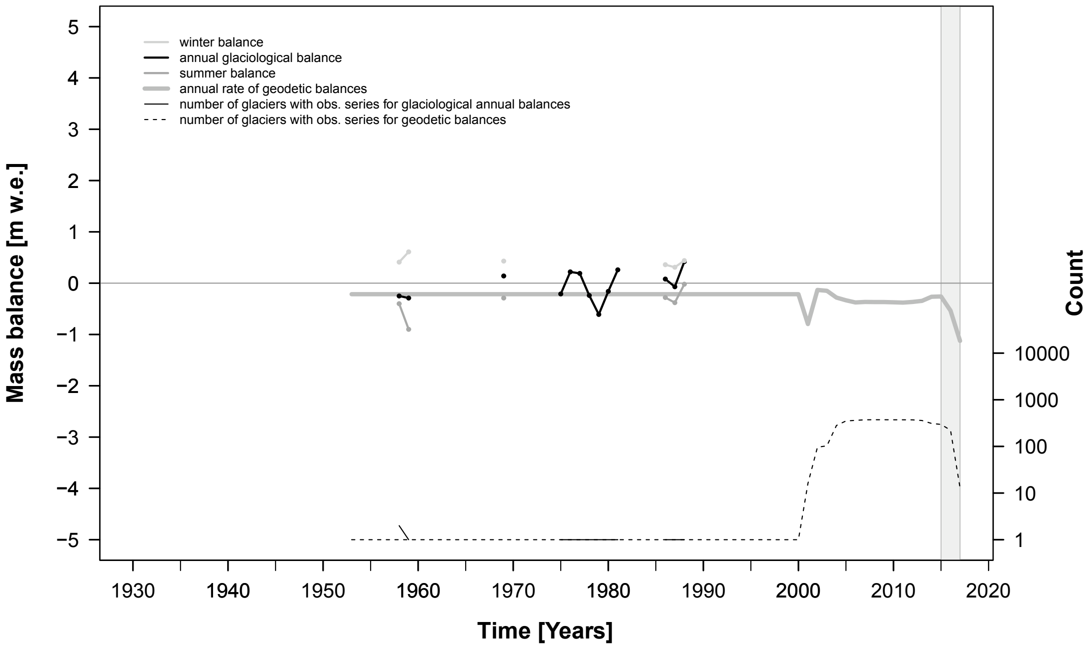


Figure 3.10.1 Regional mass balances: Annual glaciological balances (m w.e.) and annual rates of geodetic balances (m w.e. a^{-1}) are shown together with the corresponding number of glaciers with observations. Geodetic balances were calculated assuming a glacier-wide average density of 850 kg m^{-3}.

Large ice caps are located on the Russian high Arctic archipelagos such as Novaya Zemlya, Severnaya Zemlya and Franz Josef Land totalling an area of 51,500 km². These glaciers are very much influenced by the North Atlantic Oscillation and sea-ice conditions in the Barents and Kara Seas.

The glaciers in this region are not well investigated due to their remote locations. Front variations have been reported from about 40 outlet glaciers on Novaya Zemlya based on expeditions, topographic maps and remote sensing data (e.g., Carr et al., 2014).

Mass-balance measurements are limited to a few observation years from Sedov Glacier on Hooker Island, Franz Josef Land, and Glacier No. 104, which is part of Vavilov Ice Cap on October Revolution Island, Severnaya Zemlya.

Dated moraines suggest LIA maxima around or after 1300 for some glaciers, and the late 19th century for others on Novaya Zemlya (Zeeberg & Forman, 2001). In the Russian Arctic islands, a slight reduction was found in the glacierized area of little more than one per cent over the past 50 years (Kotlyakov, 2006). Front-variation observations document a rapid retreat of tidewater glaciers on Novaya Zemlya over the 20th century, with a more stable period during the 1950s and 1960s.

The geodetic observations indicate a mass-change rate between 200 and 350 mm w.e. a^{-1}.

Regional glacier change assessments were recently published by Carr et al. (2014) and Melkonian et al. (2016).

Estimated total glacier area (km²):	51,500
Front variations	
- # of series*:	44/0
- # of obs. from stat. or adv. glaciers*:	151/0
- # of obs. from retreating glaciers*:	382/0
Glaciological balances	
- # of series*:	3/0
- # of observations*:	14/0
Geodetic balances	
- # of series°:	373/373
- # of observations°:	3,680/3,680

* (total/2016 & 2017), ° (total/>2007)

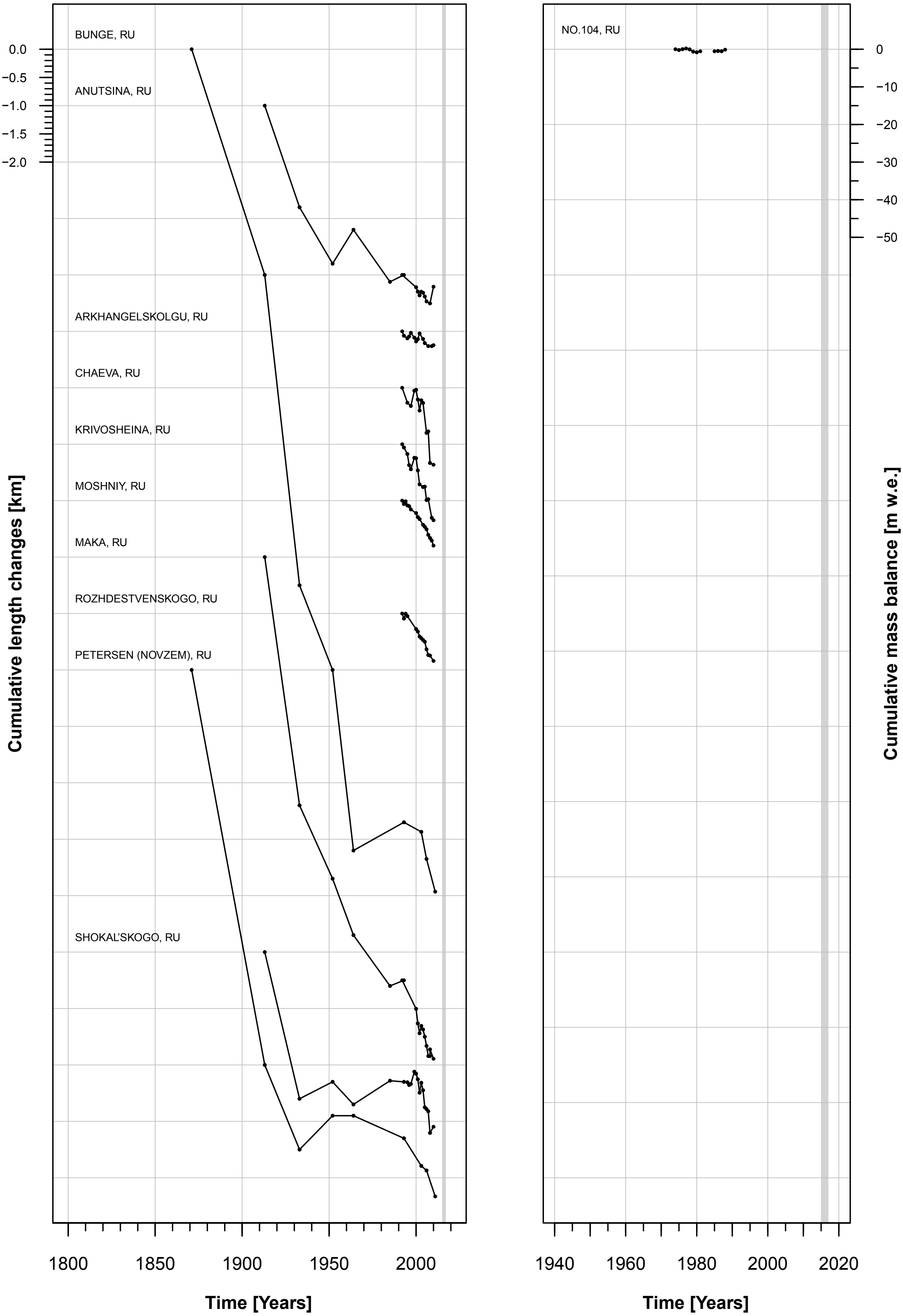


Figure 3.10.2 Cumulative length changes (left) and cumulative mass balances (right) of selected glaciers in the Russian Arctic over the entire observation period.

3.11 ASIA NORTH

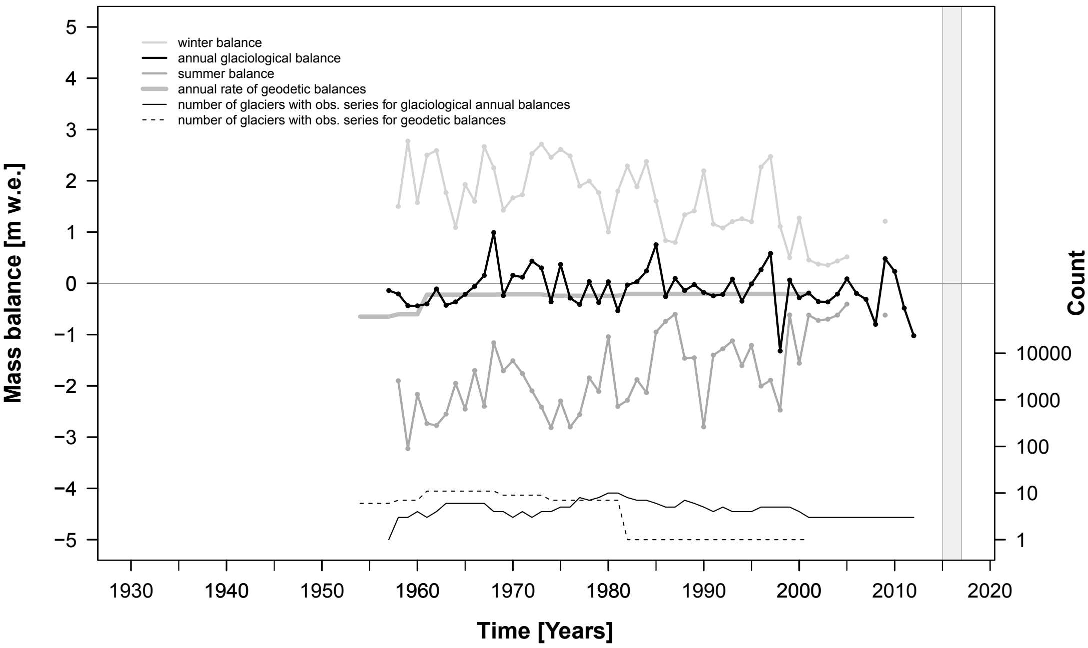


Figure 3.11.1 Regional mass balances: Annual glaciological balances (m w.e.) and annual rates of geodetic balances (m w.e. a^{-1}) are shown together with the corresponding number of glaciers with observations. Geodetic balances were calculated assuming a glacier-wide average density of 850 kg m^{-3}.

In Northern Asia, glaciers with a total area of about 2,500 km^2 are located in the mountain ranges from the Ural to the Altai, in the east Siberian Mountains, and Kamchatka. The Ural Mountains form a north-south running mountain chain that extends about 2,500 km. Its mountain peaks reach 900 to 1,400 m a.s.l. hosting about 140 small glaciers in a continental climate. The Altai extends over about 2,100 km from Kazakhstan, China, and Russia to Mongolia, and hosts the greatest number of glaciers in this region. The east Siberian Mountains such as Cherskiy Range, Suntar-Khayata, and Kodar Mountains, have only small amounts of glacier ice. The topography of Kamchatka is characterized by numerous volcanoes with heights up to almost 5,000 m a.s.l. Here, many glaciers are strongly influenced by volcanic activities.

The available data series are sparse and most of them were discontinued in the latter decades of the 20th century. The few mass-balance programmes were reported from Maliy Aktru, Leviy Aktru, and Vodopadniy (No. 125) glaciers in the Russian Altai, but got interrupted after 2012. In Japan, long-term observations are carried out on Hamagury Yuki, a perennial snow patch which is located in the northern Alps of Central Japan.

Until some years ago, investigations in the Altay failed to reveal evidence of early LIA advances (Kotlyakov et al., 1991). New studies based on lichenometry indicate extended glacier states in the late 14th and mid-19th centuries (Solomina, 2000). In the Cherskiy Range, the LIA maxima extents have been dated as 1550–1850 (Gurney et al., 2008). On Kamchatka, the maximum stage of the LIA was reached in the 19th century (Grove, 2004), with advances of similar magnitude in the 17th and 18th centuries (Solomina, 2000). The few front-variation series show a centennial retreat with no distinct re-advance periods. Kozelskiy Glacier on Kamchaka advanced during the 1950s to the mid-1980s.

Available mass-balance measurements reveal slightly negative balances since the 1960s. The small number of glaciological and geodetic observations do not allow for a sound estimate of glacier mass balance.

Estimated total glacier area (km^2):	2,500
Front variations	
- # of series*:	23/0
- # of obs. from stat. or adv. glaciers*:	43/0
- # of obs. from retreating glaciers*:	321/0
Glaciological balances	
- # of series*:	19/1
- # of observations*:	264/0
Geodetic balances	
- # of series°:	11/0
- # of observations°:	18/0

* (total/2016 & 2017), ° (total/>2007)

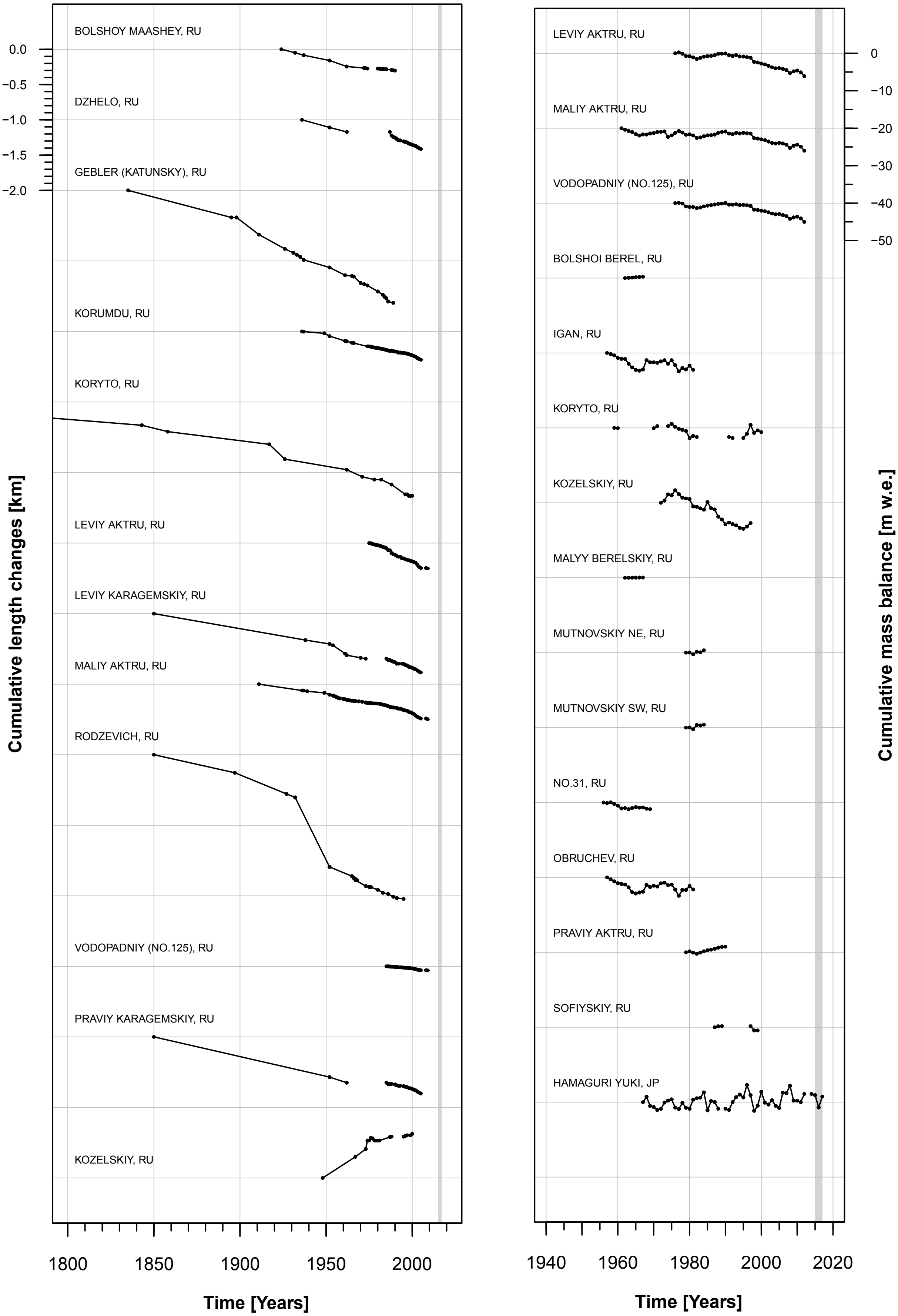


Figure 3.11.2 Cumulative length changes (left) and cumulative mass balances (right) of selected glaciers in Asia North over the entire observation period.

3.12 ASIA CENTRAL

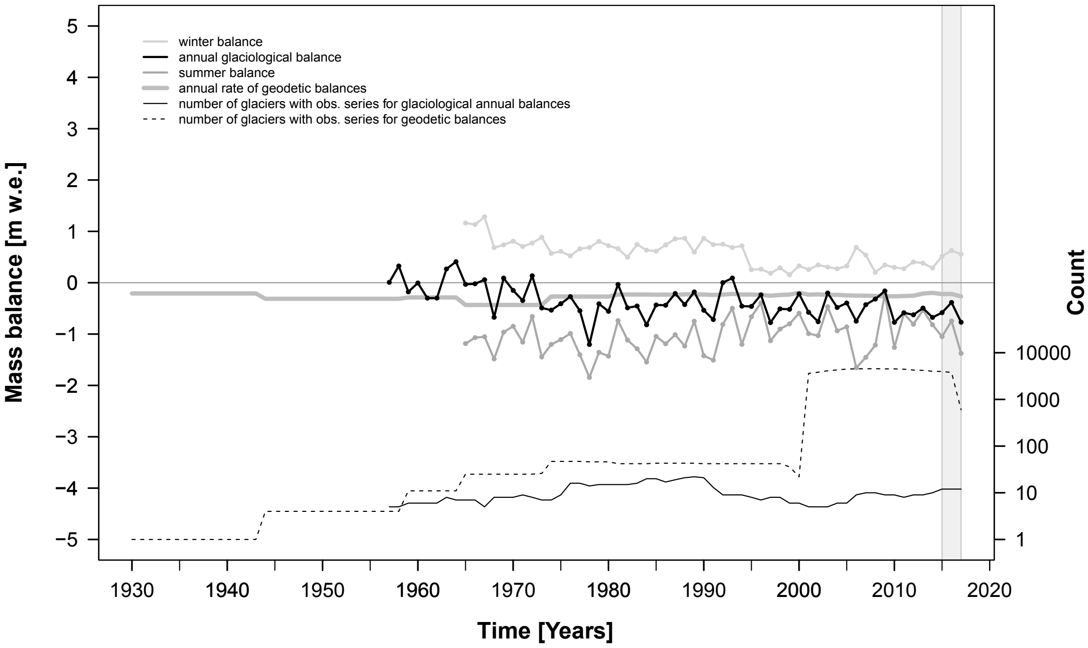


Figure 3.12.1 Regional mass balances: Annual glaciological balances (m w.e.) and annual rates of geodetic balances (m w.e. a^{-1}) are shown together with the corresponding number of glaciers with observations. Geodetic balances were calculated assuming a glacier-wide average density of 850 kg m^{-3}.

Central Asia stretches from the Caspian Sea in the west to China in the east and from Russia in the north to Afghanistan in the south. It is characterised by a continental climate. Glaciers cover a total area of about 49,500 km^2 and are located in the Hissar Alay, Pamir, Tien Shan, Kunlun, and Qilian Mountains.

There is a large number of glacier fluctuation series available, distributed evenly over the region. However, continuous long-term measurements are sparse. Most of the observation series were discontinued after the demise of the Soviet Union. Only two of the long-term mass-balance programmes have been continued: Ts. Tuyuksuyskiy and Urumqi Glacier No. 1 in the Kazakh and Chinese Tien Shan, respectively. In recent years, interrupted long-term mass-balance measurements have been resumed at Abramov, Golubin, Glacier No. 354 (Akshiyrak), Batysh Sook/Syek Zapadniy, and Kara-Batkak in Kyrgyzstan.

The LIA is considered to have lasted until the mid or late 19th century in most regions (Grove, 2004) with glacier maximum extents occurring between the 17th and mid 19th centuries (Solomina, 1996; Su & Shi, 2002; Kutuzov, 2005). Front-variation observations show a general retreat over the 20th century with some re-advances around the 1970s.

The available mass-balance measurements indicate slightly negative balances in the 1950s and 1960s with increased ice loss of about –500 mm w.e. a^{-1} between the 1970s and 2000s. Seasonal balances show a relatively small mass turnover. The glaciological results are supported by the available geodetic surveys. Regional average balances for 2015/16 and 2016/17 were –385 and –769 mm w.e., respectively.

Geodetic assessments were made available from various studies (Brun et al., 2017; Gardelle et al. 2013; Holzer et al., 2015; Piedzonka & Bolch, 2015) and show a mass-change rate of about –250 mm a^{-1} since 2000.

Regional glacier change assessments were recently published by Sorg et al. (2012), Unger-Shayesteh et al. (2013), Farinotti et al. (2015), and Hoelzle et al. (2017).

Estimated total glacier area (km^2):	49,500
Front variations	
- # of series*:	309/10
- # of obs. from stat. or adv. glaciers*:	390/3
- # of obs. from retreating glaciers*:	1,180/13
Glaciological balances	
- # of series*:	42/12
- # of observations*:	637/24
Geodetic balances	
- # of series°:	4,564/4,550
- # of observations°:	10,912/10,822

* (total/2016 & 2017), ° (total/>2007)

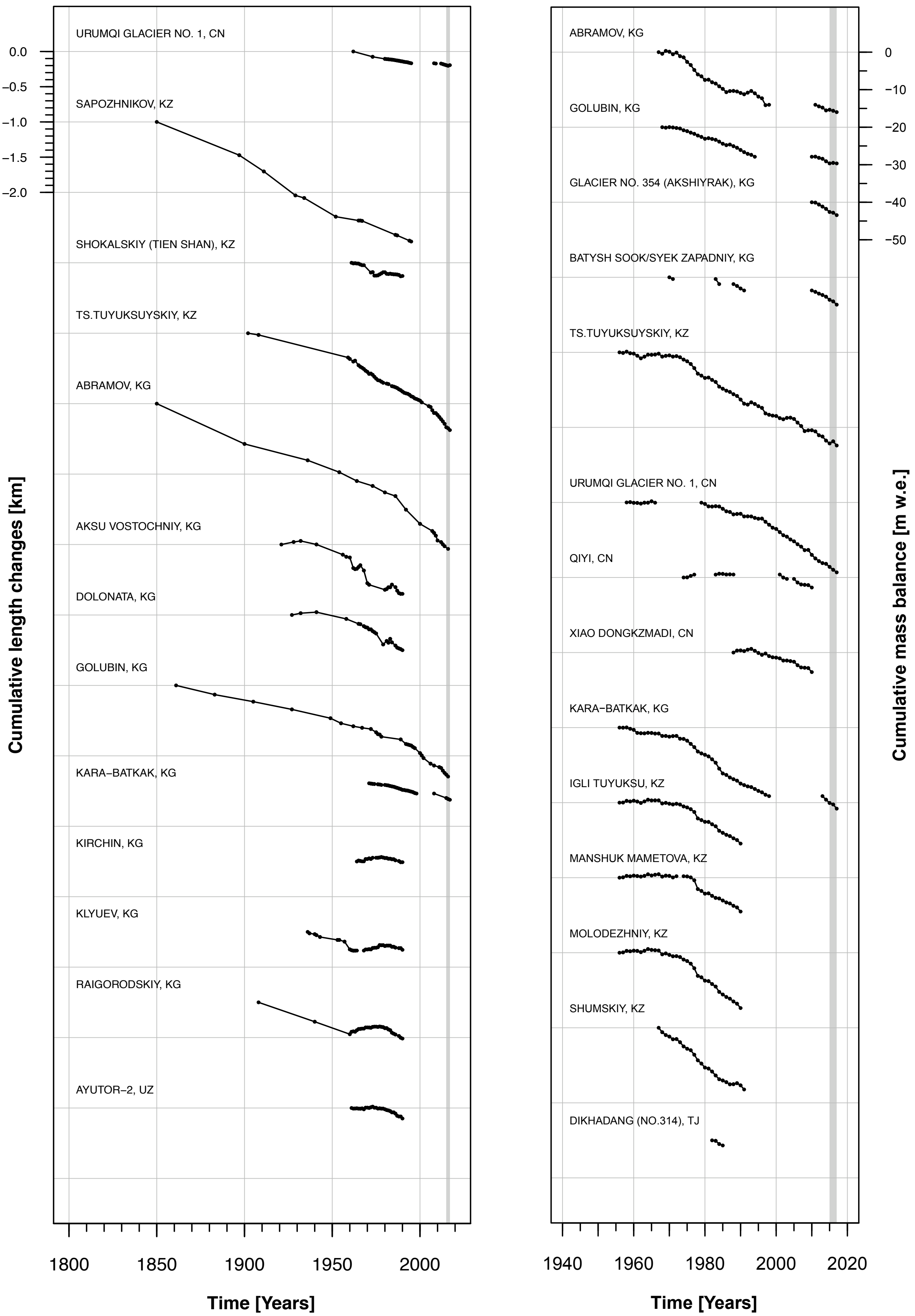


Figure 3.12.2 Cumulative length changes (left) and cumulative mass balances (right) of selected glaciers in Asia Central over the entire observation period.

3.13 ASIA SOUTH WEST & SOUTH EAST

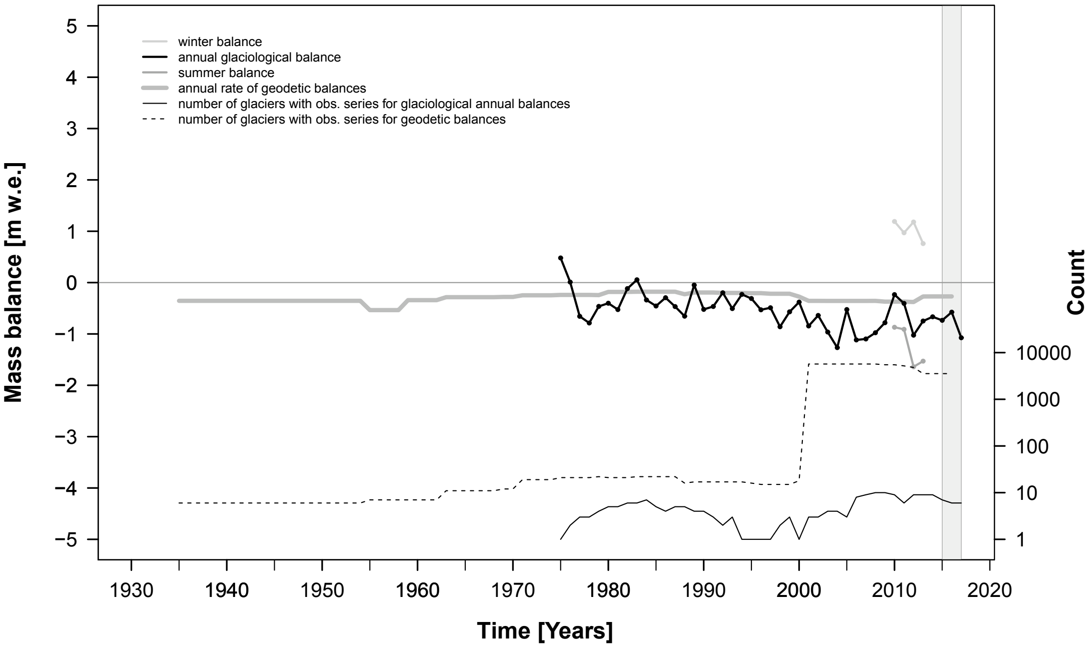


Figure 3.13.1 Regional mass balances: Annual glaciological balances (m w.e.) and annual rates of geodetic balances (m w.e. a^{-1}) are shown together with the corresponding number of glaciers with observations. Geodetic balances were calculated assuming a glacier-wide average density of 850 kg m^{-3}.

Adjacent to Central Asia, the regions Asia South West and Asia South East comprise the Karakoram, Hindu Kush, Himalaya, and Hengduan Shan mountain ranges. The Himalaya is the largest mountain range in the world and extends from the Nanga Parbat (8,126 m a.s.l.) in the NW over 2,500 km to the Mancha Barwa (7,782 m a.s.l.) in the SE. The climate, and the precipitation in particular, is characterized by the influence of the South Asian monsoon in summer and the mid-latitude westerlies in winter. The glacier area in this region totals about 48,500 km².

The data coverage of Asia South West is very sparse. The only reported mass-balance series of more than ten years is from Chhota Shigri located in the Himachal Pradesh, India. Also Asia South East lacks long-term glacier observation series. Recent mass-balance results are reported from Parlung Glacier No. 94, located in the south-eastern Tibetan Plateau, and from Yala, Rikha Samba, Pokalde, West Changri Nup and Mera glaciers in Nepal.

The LIA is considered to have lasted until the mid or late 19th century in most regions (Grove, 2004) with glacier maximum extents occurring between the 17th and mid-19th century (Solomina, 1996; Su & Shi, 2002; Kutuzov, 2005). Front-variation observations show a general retreat over the 20th century with no marked period of glacier re-advances.

Glaciological and geodetic surveys reported from a variable glacier sample indicate an ice loss at the rate of a few hundred millimetres w.e. a^{-1} over the past decades. For 2015/16 and 2016/17, reported balances were –576 and –1,074 mm w.e., respectively, in Asia South East. From the Karakoram, information about positive mass balances and re-advances of (mainly surge-type) glaciers has been reported for the beginning of the 21st century.

Regional geodetic assessments were recently made available by Bolch et al. (2011), Brun et al. (2015), Gardelle et al. (2013), Rankl et al. (2014), and Vijay et al. (2016).

Estimated total glacier area (km²):	48,500
Front variations	
- # of series*:	87/2
- # of obs. from stat. or adv. glaciers*:	64/0
- # of obs. from retreating glaciers*:	279/2
Glaciological balances	
- # of series*:	32/6
- # of observations*:	205/12
Geodetic balances	
- # of series°:	5,697/5,692
- # of observations°:	6,254/6,206

* (total/2016& 2017), ° (total/>2007)

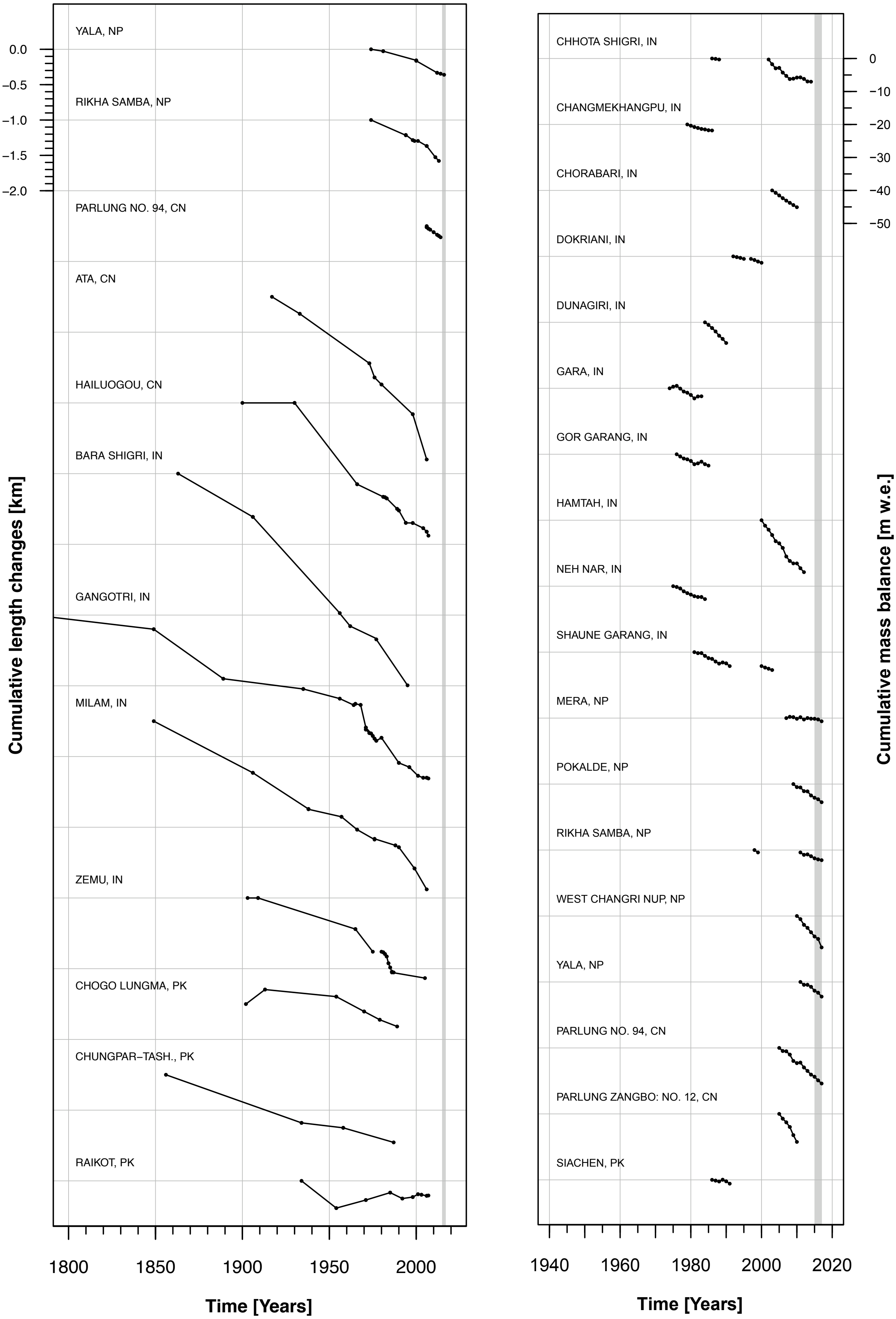


Figure 3.13.2 Cumulative length changes (left) and cumulative mass balances (right) of selected glaciers in Asia South East and South West over the entire observation period.

3.14 LOW LATITUDES (incl. Africa & New Guinea)

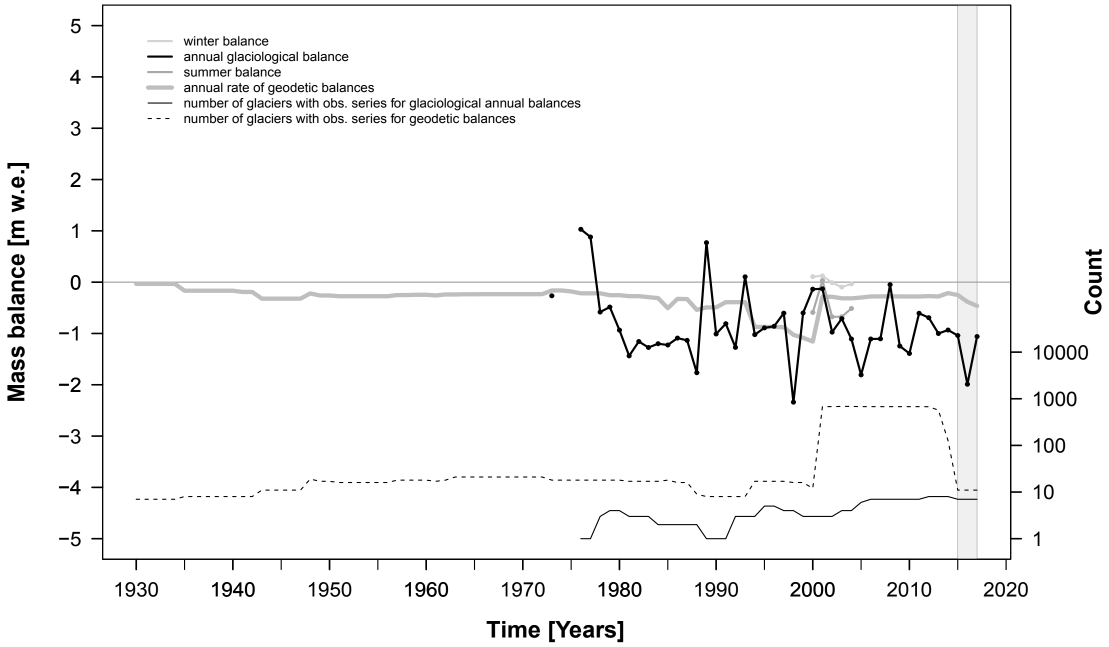


Figure 3.14.1 Regional mass balances: Annual glaciological balances (m w.e.) and annual rates of geodetic balances (m w.e. a^{-1}) are shown together with the corresponding number of glaciers with observations. Geodetic balances were calculated assuming a glacier-wide average density of 850 kg m^{-3}.

Glaciers in the low latitudes are situated on the highest mountain peaks of Mexico and in the tropical Andes. In addition, a few ice bodies are located in East Africa on Ruwenzori, Mount Kenya and Kilimanjaro, as well as in Papua (formerly Irian Jaya, Indonesia) and Papua New Guinea. The glacier area of the Low Latitudes totals about 2,500 km^2 of which the largest parts are located in Peru and Bolivia. In the tropical Andes, long-term monthly mass-balance measurements are carried out at Zongo and Charquini Sur glaciers (BO), Antizana 15 Alpha (EC), and Conejeras (CO). Several dozen front-variation series document glacier retreat over the past half-century. Front variations of glaciers in Africa and New Guinea are well documented with a few observation series back to the 19th century. From Lewis Glacier on Mount Kenya, mass-balance measurements have been reported between 1978/79 and 1995/96 and again between 2010/11 and 2013/14.

In the tropical Andes, glaciers reached their latest LIA maximum extensions between the mid-17th and early 18th centuries (Rabatel et al., 2013). Glaciers in Peru and Ecuador were in advanced positions until the 1860s, followed by a rapid retreat (Grove, 2004). Front-variation observations document a general retreat over the 20th century, with increase retreat rates since the late 1970s. In Africa, glaciers reached their LIA maximum extents towards the late 19th century (Hastenrath, 2001) followed by a continuous retreat until present. In New Guinea, glaciers reached their LIA maxima in the mid-19th century. Here the glacier changes have been traced from information on glacier extents derived from historical records, dated cairns erected during several expeditions, and remote sensing data. All ice masses except some on Punkcak Java seem to have now disappeared.

The regional mass balance shows a strong interannual variability with an average mass balance around –800 mm w.e. a^{-1} since between the 1970s and the 2000s. The reported balances for 2015/16 and 2016/17 were –1,990 and –1,060 mm w.e., respectively. Regional glacier change assessments were recently published by Braun et al. (2019), Prinz et al. (2011), and Rabatel et al. (2013).

Estimated total glacier area (km^2):	2,500
Front variations	
- # of series*:	90/12
- # of obs. from stat. or adv. glaciers*:	54/4
- # of obs. from retreating glaciers*:	525/18
Glaciological balances	
- # of series*:	14/7
- # of observations*:	182/14
Geodetic balances	
- # of series°:	714/679
- # of observations°:	941/869

* (total/2016 & 2017), ° (total/>2007)

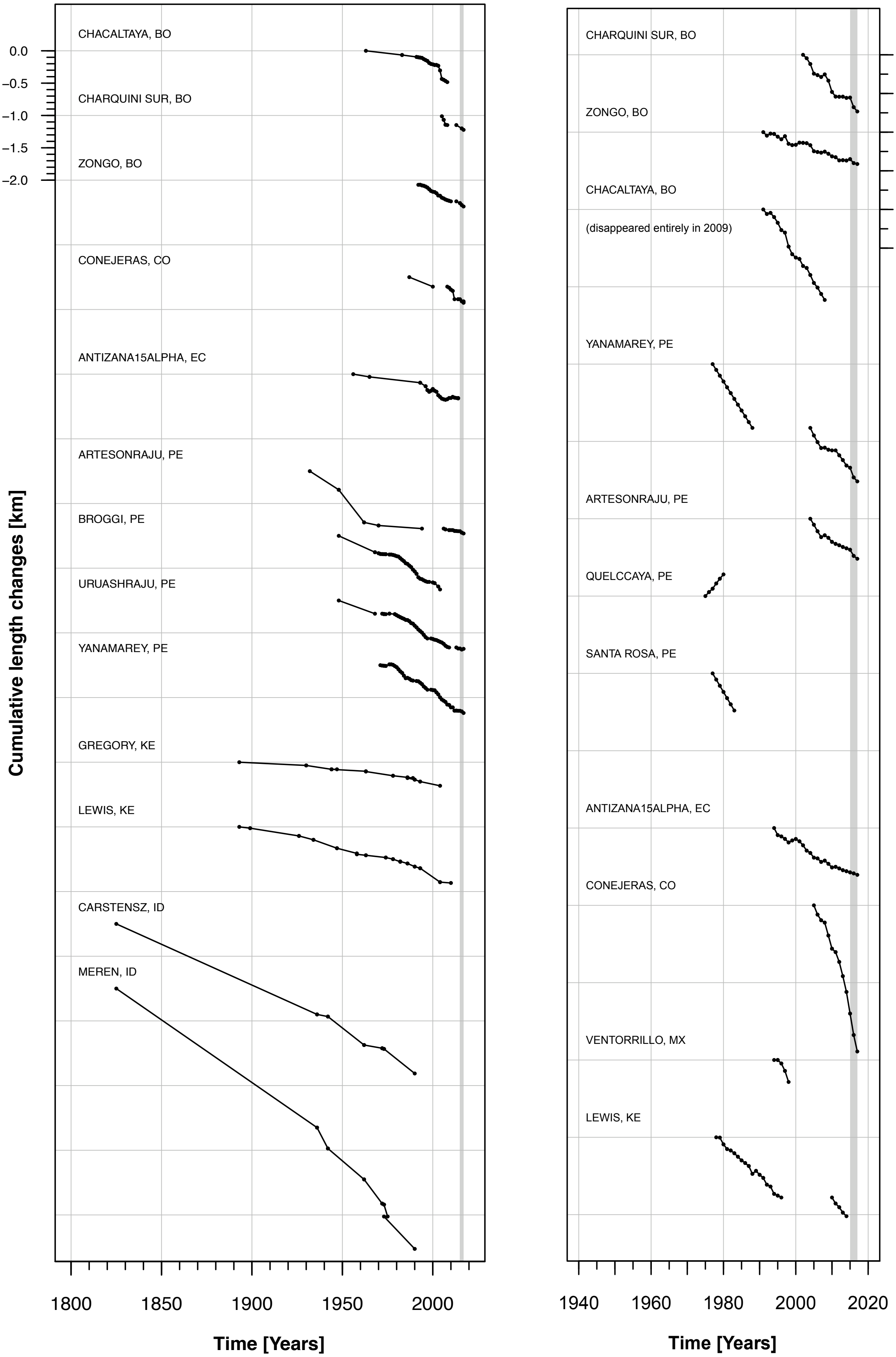


Figure 3.14.2 Cumulative length changes (left) and cumulative mass balances (right) of selected glaciers in the Low Latitudes over the entire observation period.

3.15 SOUTHERN ANDES

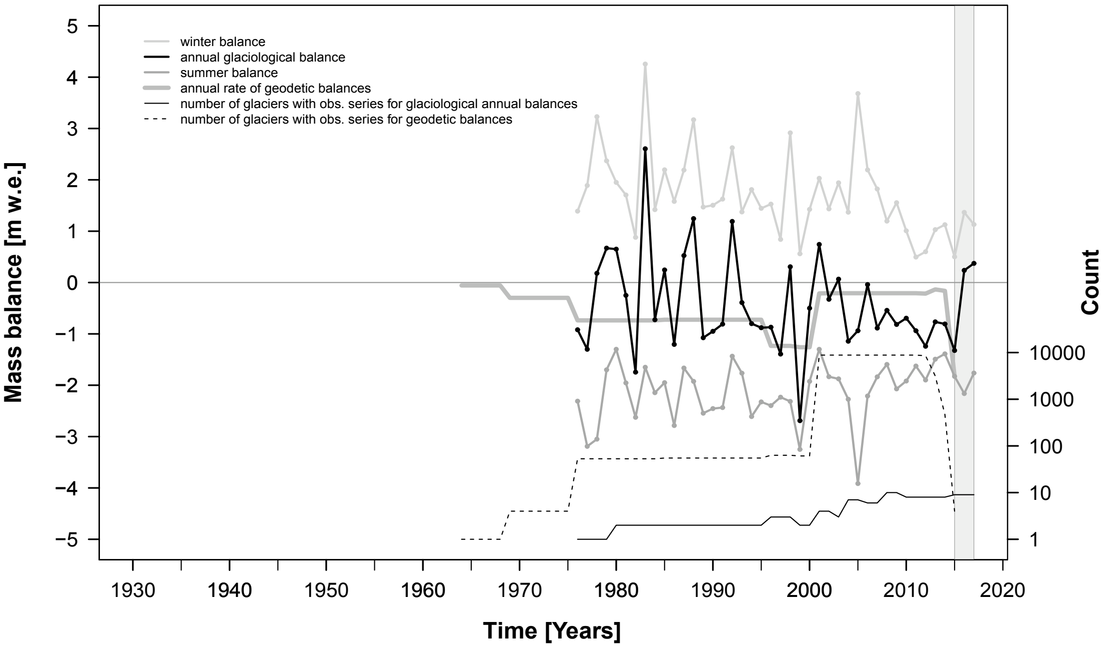


Figure 3.15.1 Regional mass balances: Annual glaciological balances (m w.e.) and annual rates of geodetic balances (m w.e. a^{-1}) are shown together with the corresponding number of glaciers with observations. Geodetic balances were calculated assuming a glacier-wide average density of 850 kg m^{-3}.

The Southern Andes contain the glaciers of Argentina and Chile, with a total glacier area of about 29,500 km² (cf., Barcaza et al., 2017; Zalazar et al., 2017). The climate and topography vary along the Andes with an important transition around 35° S, between the Dry Andes to the north and the Wet Andes to the south. Most of the glacier area is located in the Wet Andes, including the large Northern and Southern Patagonian Icefields and Cordillera Darwin in Tierra del Fuego. However, the importance of glaciers as a freshwater storage is much higher in the Dry Andes where major cities with large irrigation areas, like Santiago and Mendoza, are located.

The longest mass-balance series of the entire Andes is reported from Echaurren Norte (CL) with continuous measurements since 1975/76. The available mass-balance measurements indicate a strong interannual variability with decadal mean balances slightly negative in the 1970s, 1980s, and 2000s; and –680 mm w.e. a^{-1} in the 1990s. In the last 10 years, several new monitored series were initiated on glaciers in different regions.

Geodetic thickness changes for most glaciers in the Southern Andes were comprehensively assessed and show widespread loss since 2000, with larger rates in the Wet Andes (Braun et al., 2019; Dussaillant et al., 2019). The icefields of Patagonia have the highest down-wasting rates, contributing significantly to sea-level rise (Rignot et al., 2003; Malz et al., 2018).

In the Southern Andes, most glaciers reached their LIA maximum between the late 17th and early 19th century (Masiokas et al., 2009). Most front-variation measurements document a general retreat since the LIA maximum extent with some re-advances in the 1980s and a general retreat trend in recent decades (Lopez et al., 2010; Meier et al., 2018). In the Dry Andes, 21 glaciers with surge-type behavior were found (Falaschi et al., 2018), with only a few well-documented cases; the most recent being Horcones Inferior and Nevado del Plomo in Argentina (Pitte et al., 2016).

Estimated total glacier area (km²):	29,500
Front variations	
- # of series*:	213/16
- # of obs. from stat. or adv. glaciers*:	176/2
- # of obs. from retreating glaciers*:	525/14
Glaciological balances	
- # of series*:	15/9
- # of observations*:	184/18
Geodetic balances	
- # of series°:	8,870/8,825
- # of observations°:	8,919/8,835

* (total/2016 & 2017), ° (total/>2007)

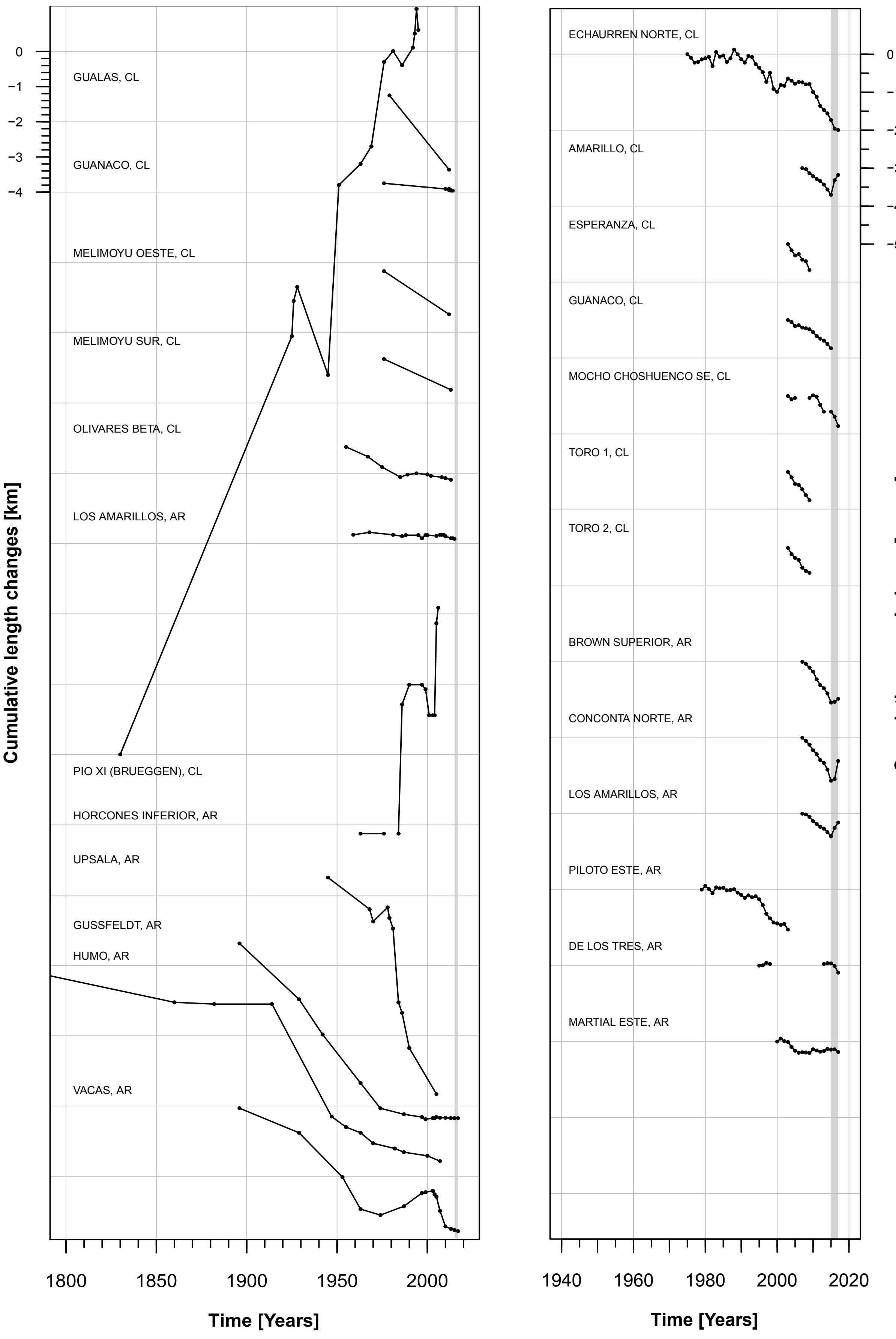


Figure 3.15.2 Cumulative length changes (left) and cumulative mass balances (right) of selected glaciers in the Southern Andes over the entire observation period.

3.16 NEW ZEALAND

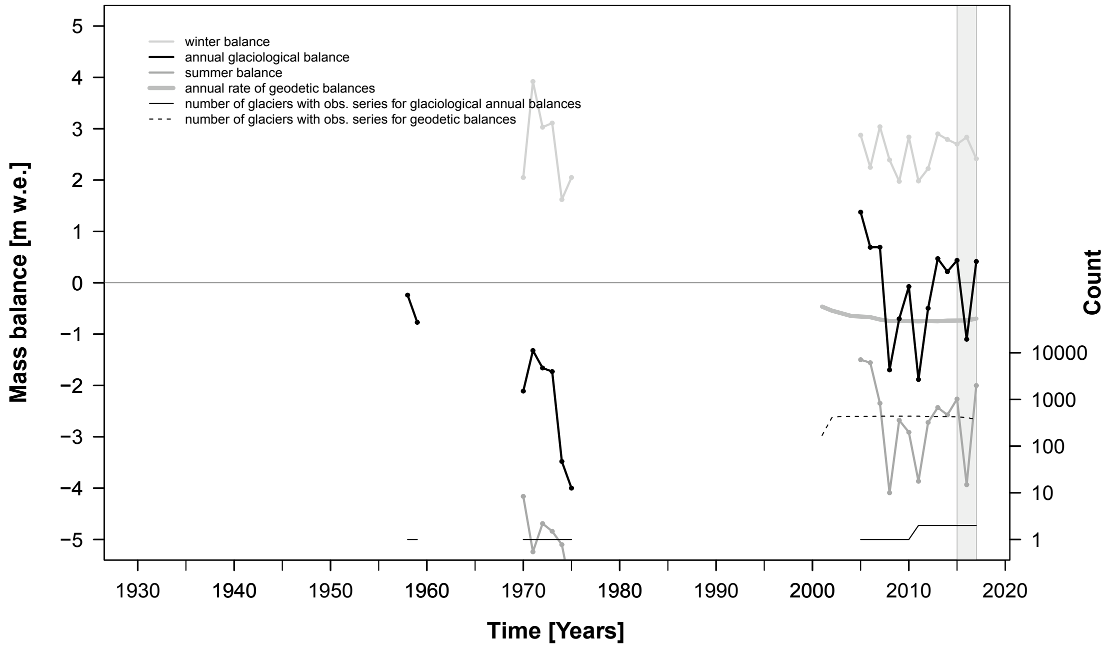


Figure 3.16.1 Regional mass balances: Annual glaciological balances (m w.e.) and annual rates of geodetic balances (m w.e. a^{-1}) are shown together with the corresponding number of glaciers with observations. Geodetic balances were calculated assuming a glacier-wide average density of 850 kg m^{-3}.

The majority of glaciers in New Zealand are located along the Southern Alps spanning the length of the South Island between 42° and 46° south. Their climatic regime is characterized by high precipitation with extreme gradients. Mean annual precipitation amounts to 4,500 mm on the west side (Whataroa) of the Alps and maximum values of up to 15,000 mm (cf. WGMS, 2008).

Aoraki/Mount Cook is the highest peak at 3,724 m a.s.l. The Haupapa/Tasman Glacier, the largest glacier in New Zealand, is located below its flank. In total, the inventory of 1978 reported 3,144 glaciers covering an area of about 1,000 km^2 with an estimated total ice volume of about 53 km^3 at that time (Chinn, 2001).

New Zealand has a long history of glacier observation; however, most of the available front variation series are of qualitative character, i.e., indicating whether glacier fronts are advancing, retreating or stationary. Long-term quantitative front-variation series are reported for Franz Josef Glacier/Kā Roimata o Hine Hukatere, Fox Glacier/Te Moeka o Tuāwe, and Stocking/Te Wae Wae Glacier. Mass-balance observations are available for only a few glaciers; recent measurements have been reported for Brewster and Rolleston.
Since 1977, the end-of-summer-snow-line has been surveyed on fifty index glaciers distributed over the Southern Alps. The surveys are carried out by hand-held oblique photography taken from a light aircraft. Methods, data and more details are given in Chinn et al. (2005).

The few mass-balance measurements indicate a large interannual variability with an average mean balance of a few hundred millimetres w.e. a^{-1}. Seasonal balances indicate very large mass turnover. Average annual balances (of Rolleston and Brewster) were negative in 2015/16 with –1,100 and positive with 414 mm w.e. in 2016/17.

The geodetic assessment by Zemp et al. (2019a) shows a mass-change rate of about –600 mm w.e. a^{-1} since 2000. Regional glacier change assessments were recently published by Mackintosh et al. (2017).

Estimated total glacier area (km^2):	1,000
Front variations	
- # of series*:	104/69
- # of obs. from stat. or adv. glaciers*:	492/44
- # of obs. from retreating glaciers*:	656/86
Glaciological balances	
- # of series*:	5/2
- # of observations*:	30/4
Geodetic balances	
- # of series°:	439/433
- # of observations°:	31,853/30,913
* (total/2016 & 2017), ° (total/>2007)	

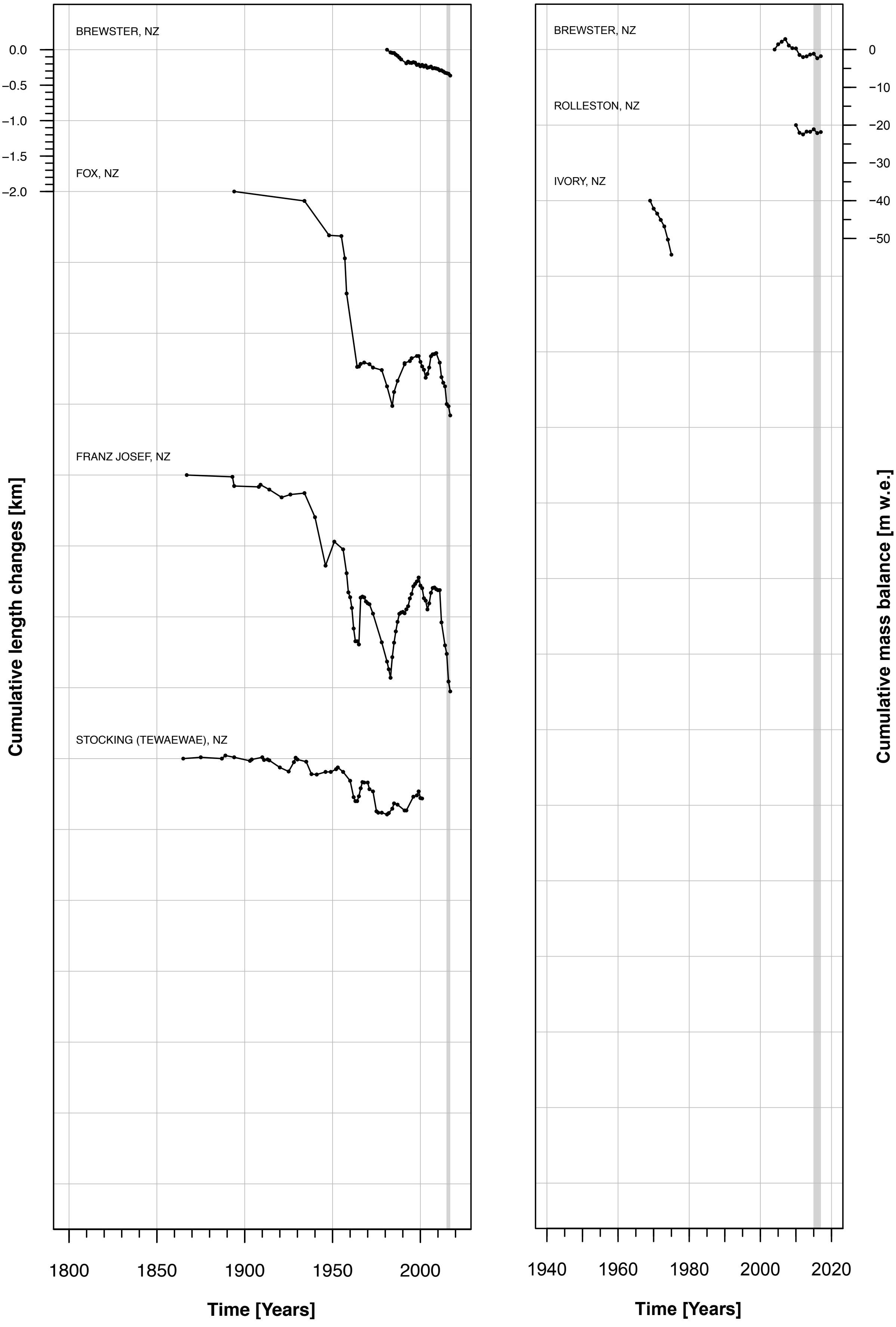


Figure 3.16.2 Cumulative length changes (left) and cumulative mass balances (right) of selected glaciers in New Zealand over the entire observation period.

3.17 ANTARCTICA & SUBANTARCTIC ISLANDS

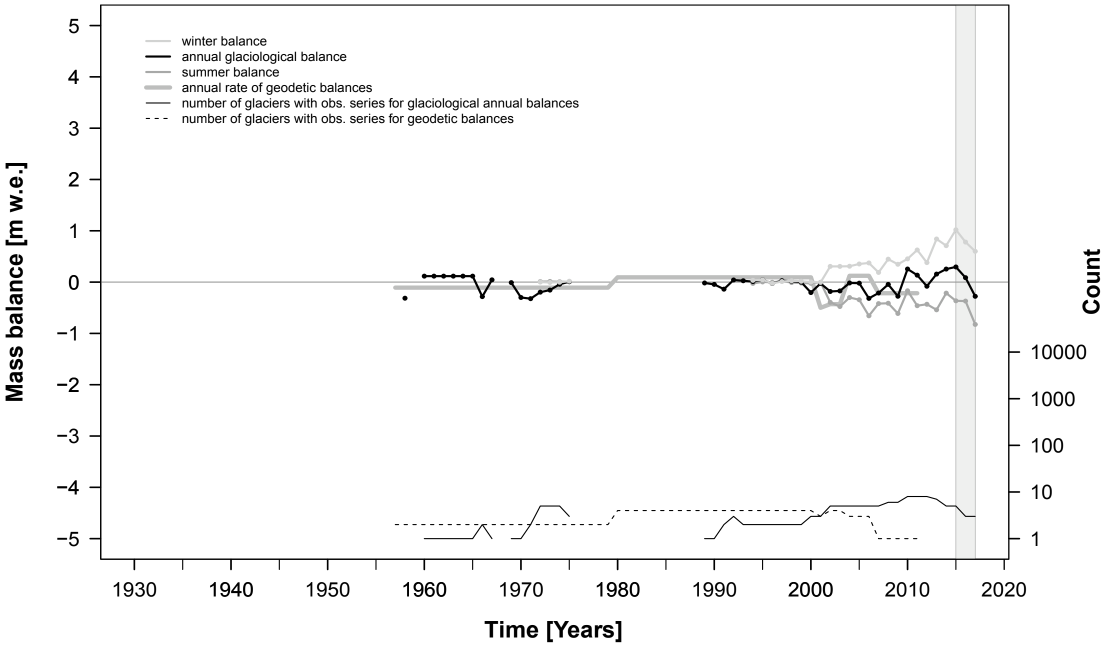


Figure 3.17.1 Regional mass balances: Annual glaciological balances (m w.e.) and annual rates of geodetic balances (m w.e. a^{-1}) are shown together with the corresponding number of glaciers with observations. Geodetic balances were calculated assuming a glacier-wide average density of 850 kg m^{-3}.

The total area of local glaciers in and around Antarctica is estimated to be about 133,000 km^2. Mainly due to the remoteness and the immense size of the ice masses, little is known about these glaciers. There are three categories of local glaciers outside the ice sheet: coastal glaciers, ice streams which are discrete dynamic units attached to the ice sheet, and isolated ice caps. In addition, glaciers are situated on Subantarctic Islands such as the South Shetland Islands, South Georgia, Heard Islands, and Kerguelen with a total estimated ice cover of roughly 7,000 km^2. Mass-balance measurements are available from only a dozens of glaciers. Series of more than ten years are reported from Bahía del Diablo on Vega Island as well as from Hurd and Johnsons glaciers on Livingston Island located east and west of the northern tip of the Antarctic Peninsula.

Evidence of the timing of LIA glacier maxima south of the Antarctic Circle (66° 30’ S) is sparse due to the lack of organic material for dating (Grove, 2004). For South Georgia, LIA maximum extends are reported for the 18th, 19th, and 20th centuries (Clapperton et al., 1989a, b) and LIA end is suggested to be 1870s from lichenometry (Roberts et al., 2010).

Front variations, derived from aerial photographs and satellite images, of glaciers on the Antarctic Peninsula show a vast majority of glaciers retreating over the past six decades (e.g., Cook et al. 2005). Glaciers on South Georgia receded overall by varying amounts from their more advanced positions in the 19th century, with large tidewater glaciers showing a more variable behaviour and remaining in relatively advanced positions until the 1980s. According to expedition records, little or no change occurred on glaciers at Heard Island during the first decades of the 20th century (Grove, 2004). However, in the second half, glacier recession has been widespread, interrupted by a period of some re-advancing glaciers in the 1960s. The very few glaciological and geodetic surveys indicate slightly negative mass balances since the 1960s and some positive years recently. Reported balance for 2015/16 and 2016/17 averaged at 86 and –277 mm w.e., respectively.

Estimated total glacier area (km^2):	133,000
Front variations	
- # of series*:	308/1
- # of obs. from stat. or adv. glaciers*:	137/1
- # of obs. from retreating glaciers*:	364/0
Glaciological balances	
- # of series*:	22/3
- # of observations*:	151/6
Geodetic balances	
- # of series°:	6/1
- # of observations°:	6/1

* (total/2016 & 2017), ° (total/>2007)

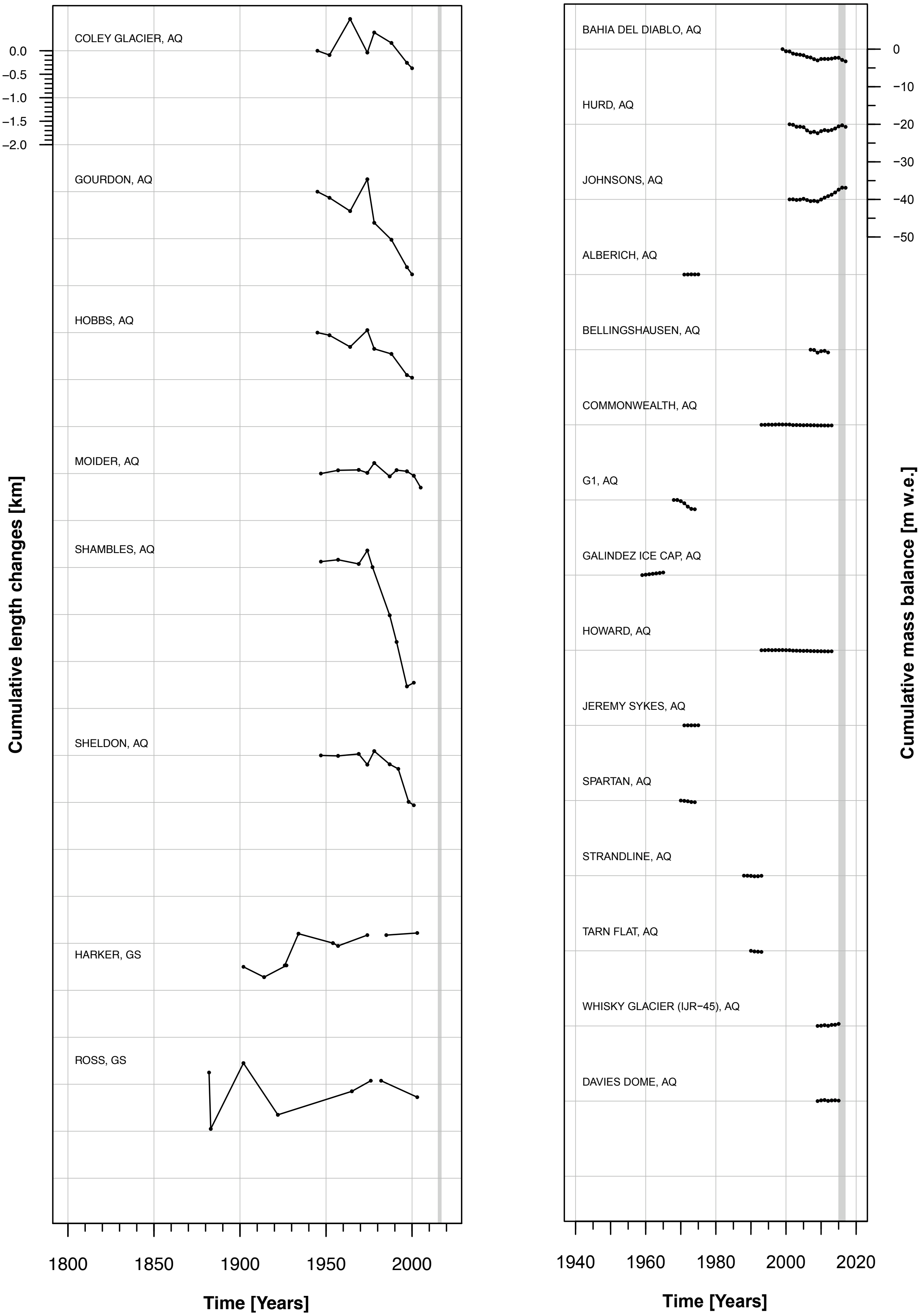


Figure 3.17.2 Cumulative length changes (left) and cumulative mass balances (right) of of selected glaciers in Antarctica and the Subantarctic Islands over the entire observation period.

4 DETAILED INFORMATION

Detailed information on selected glaciers with ongoing direct glaciological mass-balance measurements in various mountain ranges is presented here, in addition to the global and regional information contained in the previous chapters. In order to facilitate comparison between the individual glaciers, the submitted material (text, maps, graphs and tables) was standardized, and in some cases generalized.

The text provides general information on the glacier followed by characteristics of the two reported balance years. General information concerns basic geographic, topographic, climatic and glaciological characteristics of the observed glacier which may help with the interpretation of climate/glacier relationships. A recent photograph showing the glacier is included.

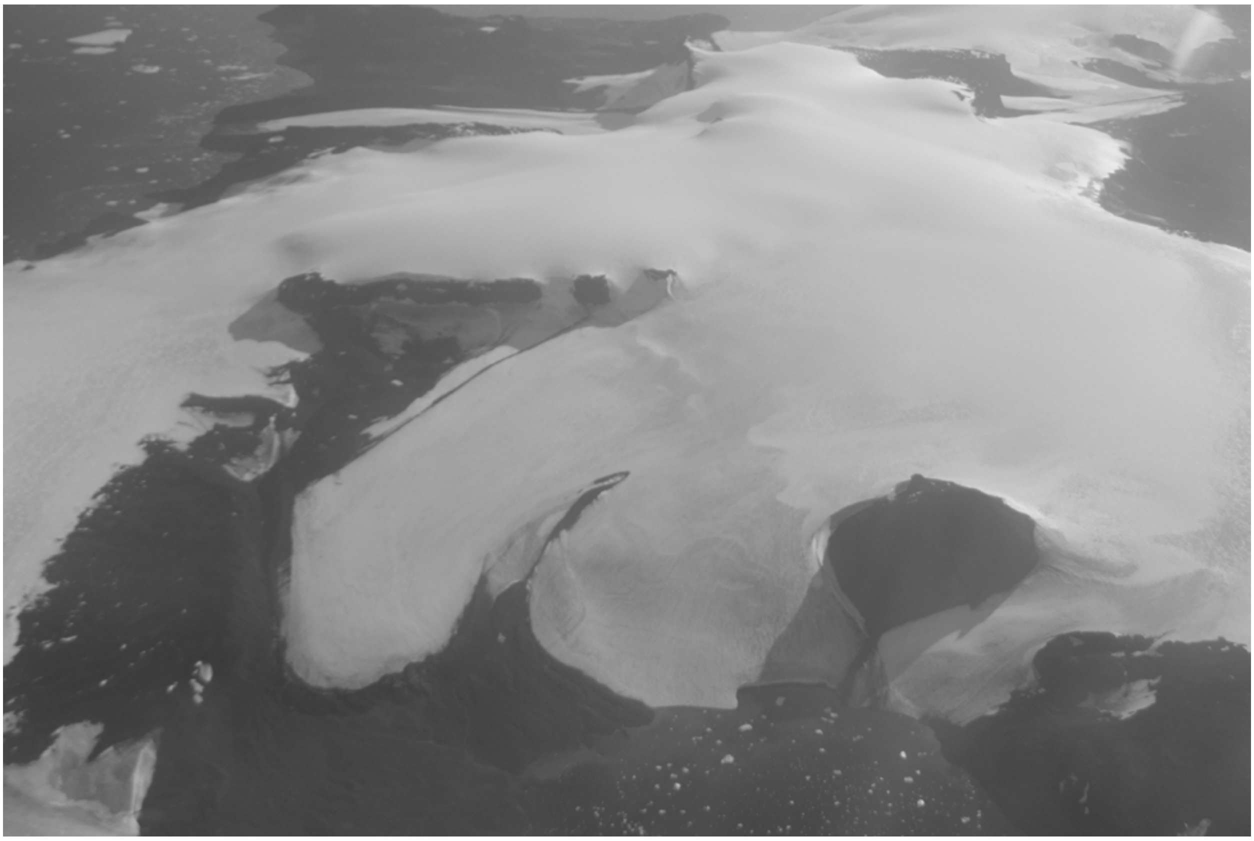
Three maps are presented for each glacier: the first one, a topographic map, shows the stakes, snow pits and snow probing network. This network is basically the same from one year to the next on most glaciers. In cases of differences between the two reported years, the second was chosen, i.e., the network from the year 2016/17. The second and third maps are mass-balance maps from the reported years, illustrating the pattern of ablation and accumulation. The accuracy of such mass-balance maps depends on the density of the observation network, the complexity of the mass-balance distribution, the applied technique for spatial extrapolation, and the experience of the local investigators.

A graph of glacier mass balance versus elevation is given for both reported years, overlaid with the corresponding glacier hypsography and point measurements (if available). The relationship between mass balance and elevation – the mass-balance gradient – is an important parameter in climate/glacier relationships and represents the climatic sensitivity of a glacier. It constitutes the main forcing function of glacier flow over long time intervals. Therefore, the-mass balance gradient near the balanced-budget equilibrium line altitude (ELA_0) is often called the ‘activity index’ of a glacier. The glacier hypsography reveals the glacier elevation bands that are most influential for the specific mass balance, and indicates how the specific mass balance might change with a shift in the ELA. An additional graph compares the mean annual glaciological and the geodetic balances (if available) for the whole observation period. For the comparison, the geodetic values were converted with a density factor of 850 kg m^{-3}.

The last two graphs show the relationship between the specific mass balance and the accumulation area ratio (AAR) and the ELA for the whole observation period. The linear regression equation is given at the top of both diagrams. The AAR regression equation is calculated using integer values only (in percent). AAR values of 0 or 100% as well as corresponding ELA values outside the elevation range of the observed glaciers were excluded from the regression analysis. The regressions were used to determine the AAR_0 and ELA_0 values for each glacier. The points from the two reported balance years (2015/16 and 2016/17) are marked in black. Minimum sample size for regression was defined as six ELA or AAR values.

4.1 BAHÍA DEL DIABLO (ANTARCTICA/A. PENINSULA)

COORDINATES: 63.82° S / 57.43° W



Photograph taken by S. Marinsek, 23 February 2017.

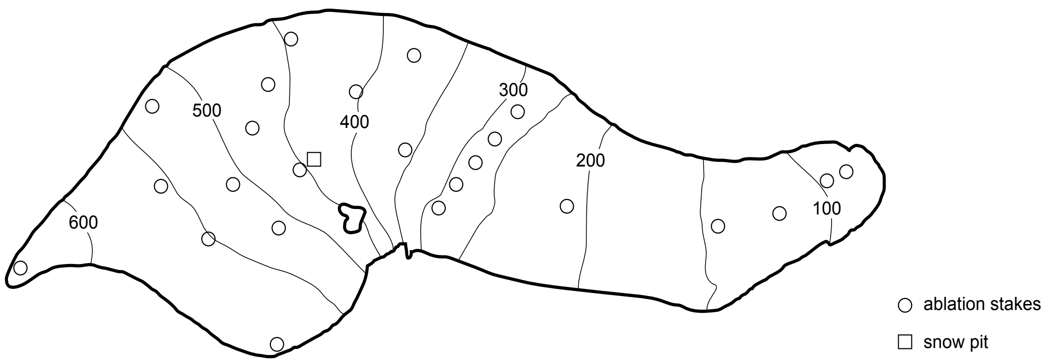
This polythermal-type outlet glacier is located on Vega Island, on the northeastern side of the Antarctic Peninsula. The glacier is exposed to the northeast, covers an area of ~12.9 km², and extends from an altitude of 630 m to 50 m a.s.l. The mean annual air temperature at the equilibrium line, around the 350 m a.s.l., ranges between –7 and –8 °C. The glacier snout overrides an ice-cored moraine over a periglacial plain of continuous permafrost. The mass-balance measurements on this glacier began in austral summer 1999/2000, using a simplified version of the combined stratigraphic annual mass-balance method because the glacier can be visited only once a year.

This data, continuing the series, confirms the existing strong correlation between the annual mass balance and mean summer air temperature. Recently, the glaciological mass-balance series was homogenized and validated using data from geodetic surveys in 2001 and 2011 (Marinsek & Ermolin, 2015). The results attained by the two methods agree well.

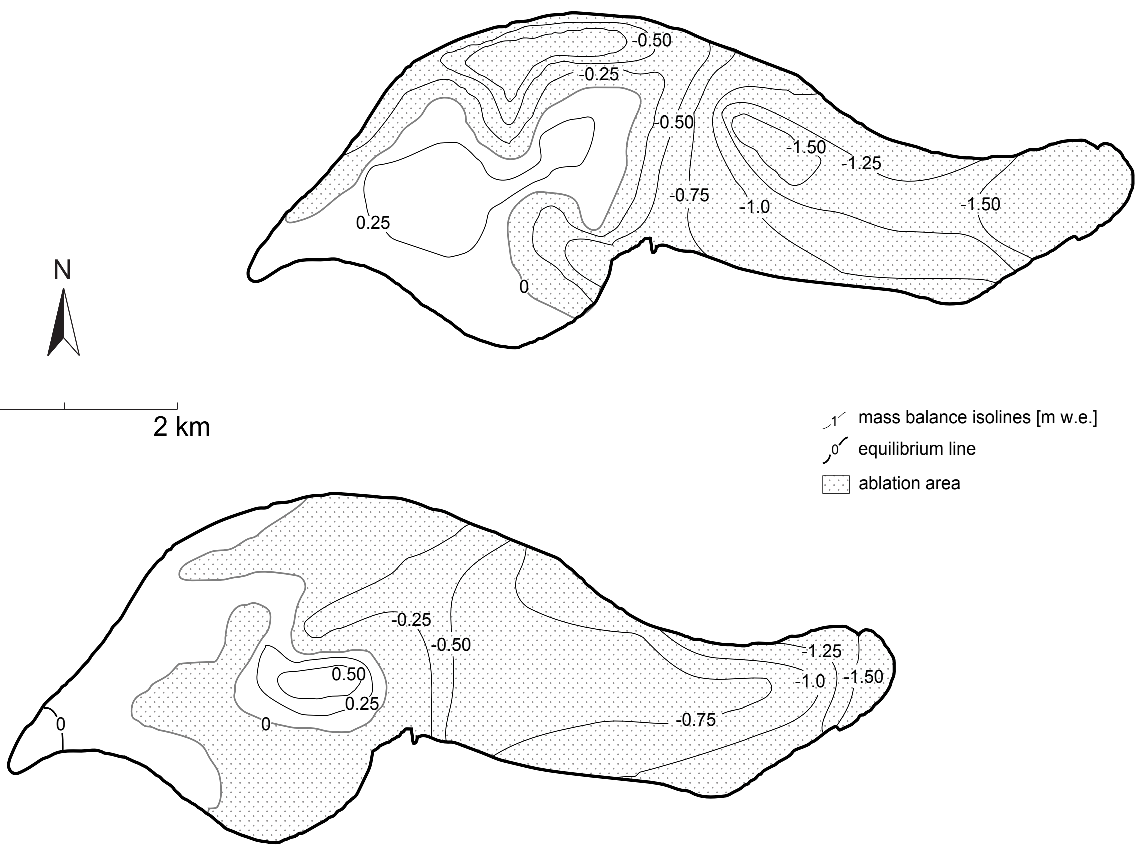
The mass balance for the year 2015/16 was –561 mm w.e. and the mass balance for the year 2016/17 was –380 mm w.e., both very negative due to a decrease of precipitation in the region compared to previous years. Recorded annual precipitation at 650 m a.s.l. was ~350 and ~300 mm respectively, whereas at sea level recorded annual precipitation was ~110 and ~90 mm respectively. At both sites, precipitation was ~200 mm less than the previous records. The low precipitation combined with positive mean summer air temperatures for both years (0.94 °C and 0.28 °C, respectively), were the reason for the high mass loss. High values for the ELA (430 and 480 m a.s.l.) and low values for the AAR (30% and 28%) are according to the obtained results for both periods.

Figure 4.1.1 Topography and observation network and mass balance maps 2015/16 and 2016/17.

Topography and observational network



Mass balance maps 2015/16 and 2016/17



Bahía del Diablo (ANTARCTICA)

Figure 4.1.2 Mass balance versus elevation for 2015/16 and 2016/17.

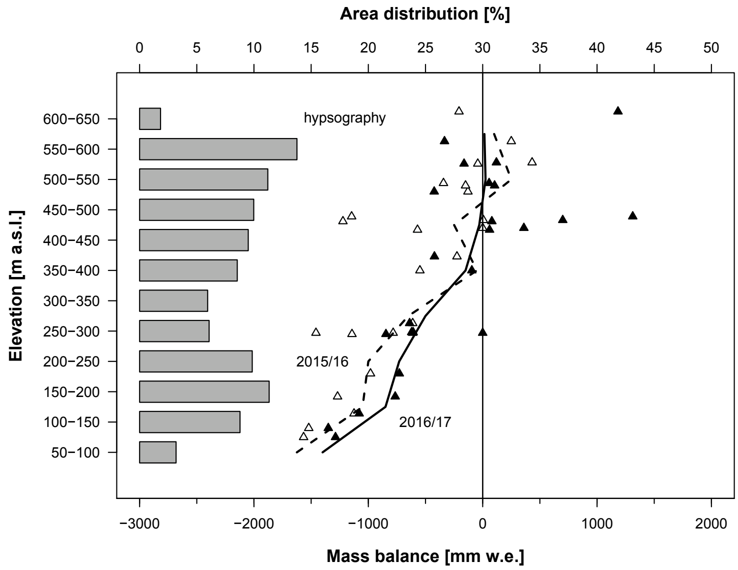


Figure 4.1.3 Glaciological balance versus geodetic balance for the whole observation period.

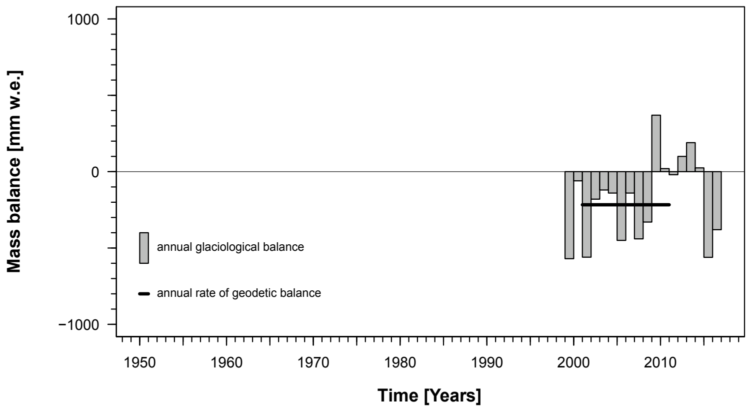
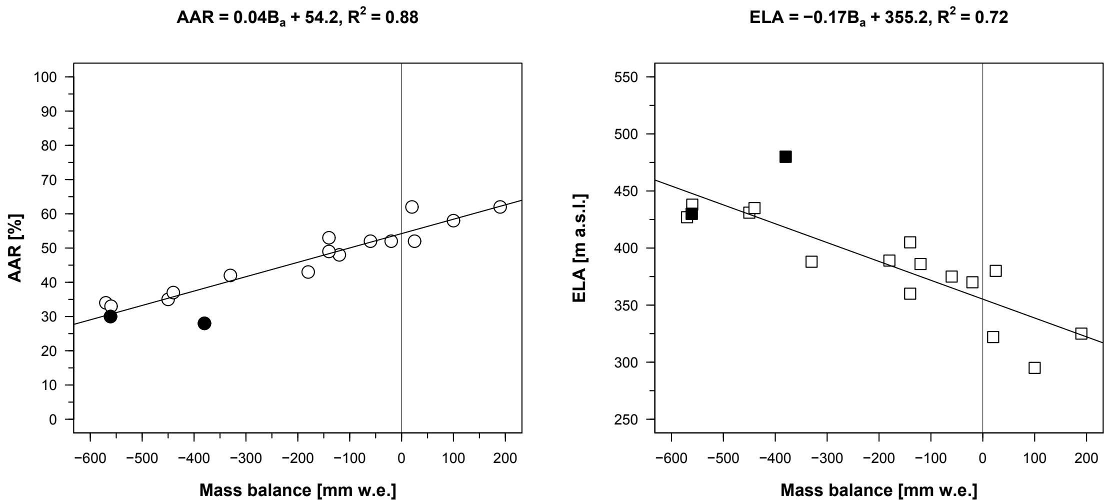


Figure 4.1.4 Accumulation area ratio (AAR) and equilibrium line altitude (ELA) versus specific mass balance for the whole observation period.



Bahía del Diablo (ANTARCTICA)

4.2 MARTIAL ESTE (ARGENTINA/ANDES FUEGUINOS)

COORDINATES: 54.78° S / 68.40° W

Photo of Martial Este Glacier (on the right side) by R. Iturraspe, 26 March 2016.

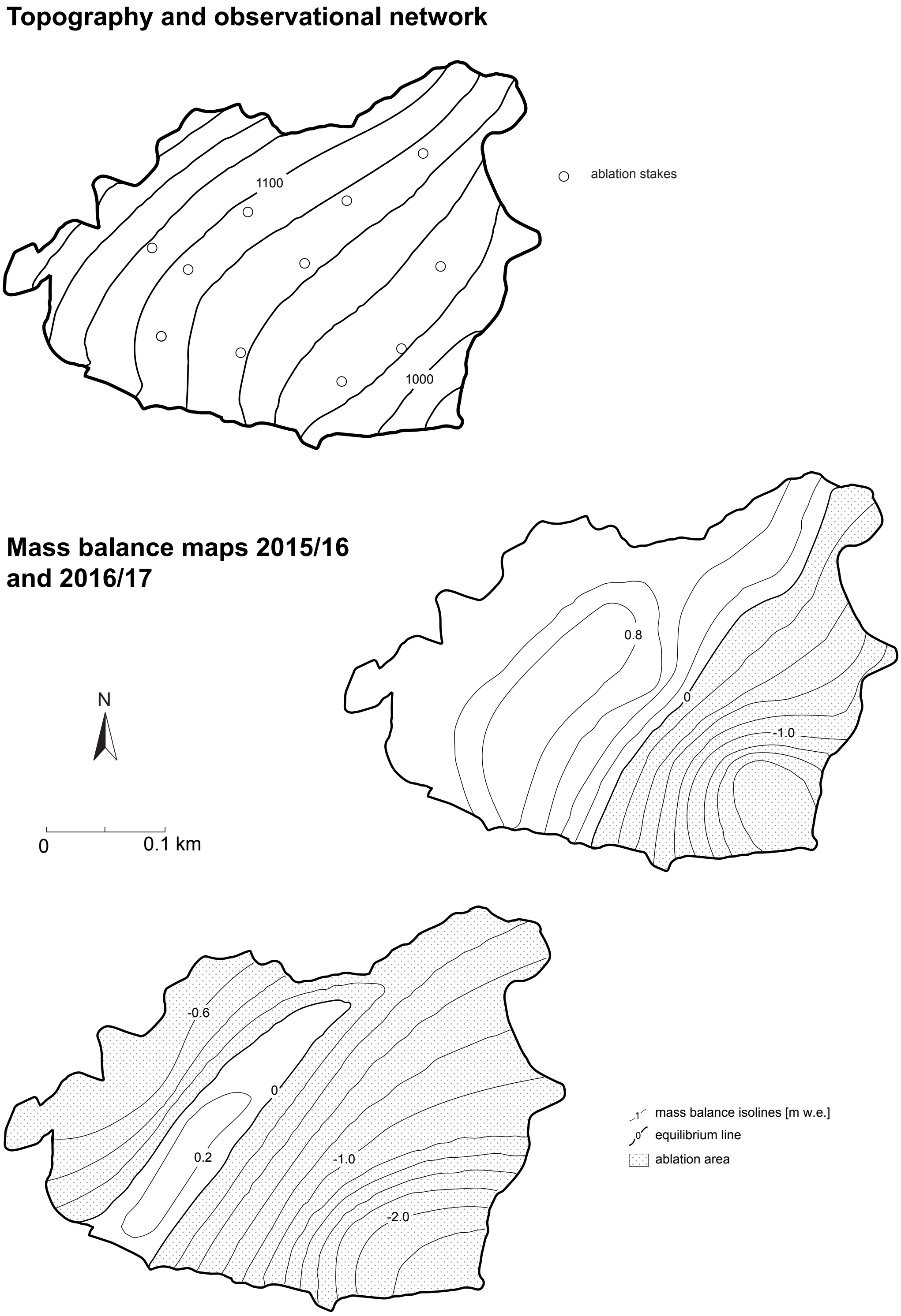
On the southern shore of the Tierra del Fuego Island, the Martial glaciers dominate the headwaters of the Buena Esperanza basin, whose major river is one of the sources of water for Ushuaia city. These glaciers have lost 75% of their total area since the Little Ice Age.

The Martial Este is one of the main ice bodies that compose the Martial cirque glaciers. The hydrological cycle starts in April and the maximum snow accumulation on the glacier is usually reached in November. A weather station, located at 1,000 m a.s.l., very close to the glacier, collects climate data. Mean annual air temperature at the ELA (1,070 m) is –1.5 °C and the precipitation, well distributed over the whole year, amounts 1,300 mm (530 mm at the sea level). Glacier monitoring is a collaborative research effort shared by the Water Agency of the Province of Tierra del Fuego and the National University of Tierra del Fuego.

The location of this temperate cirque glacier, protected from wind and solar radiation, enhances its stability. After a long recessive process that involved the entire 20th century, this small glacier has remained stable since 2006, with alternating moderate positive and negative annual mass balances.

The mass balance from 2015/16 (55 mm w.e.) was a typical figure for this period, nevertheless 2016/17, with –706 mm w.e. was the third most negative mass balance since the onset of the observations in 2000/01, as a consequence of a very low precipitation rate during the winter season.

Figure 4.2.1 Topography and observation network and mass balance maps 2015/16 and 2016/17.



Martial Este (ARGENTINA)

Figure 4.2.2 Mass balance versus elevation for 2015/16 and 2016/17.

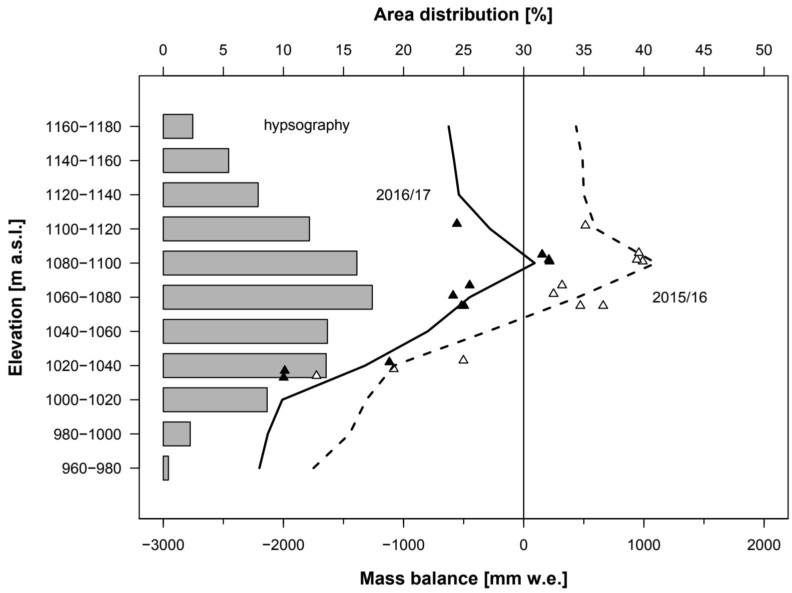


Figure 4.2.3 Glaciological balance versus geodetic balance for the whole observation period.

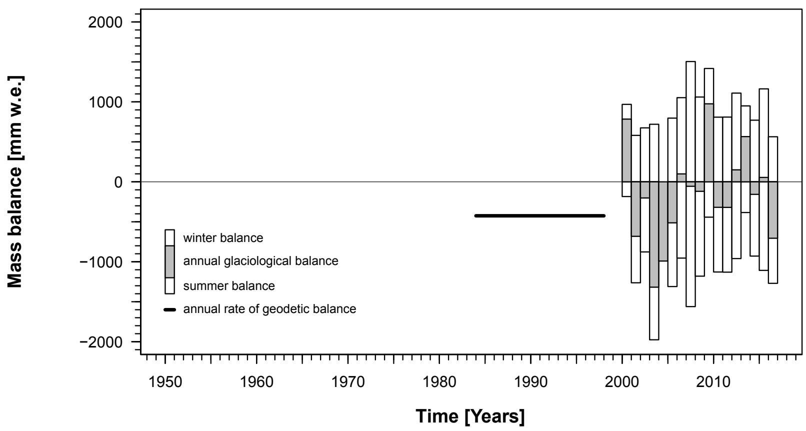
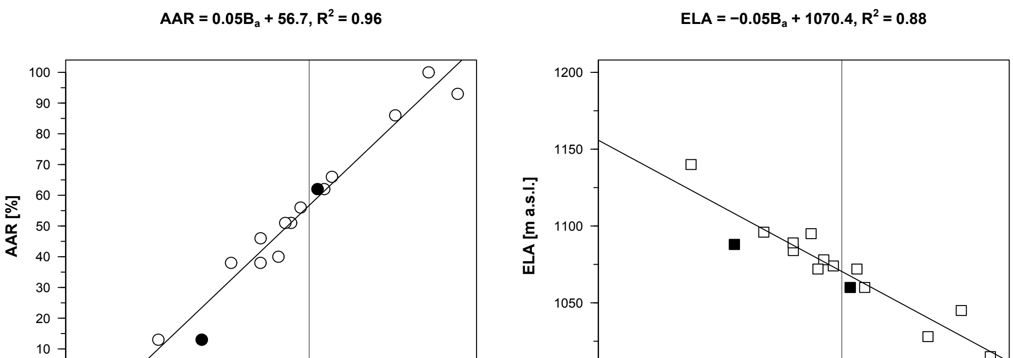


Figure 4.2.4 Accumulation area ratio (AAR) and equilibrium line altitude (ELA) versus specific mass balance for the whole observation period.



Martial Este (ARGENTINA)

4.3 GLACIAR DE LOS TRES (ARGENTINA/PATAGONIAN ANDES)

COORDINATES: 49.27° S / 73.00° W

Photograph taken by R. Villalba, 3 February 2016.

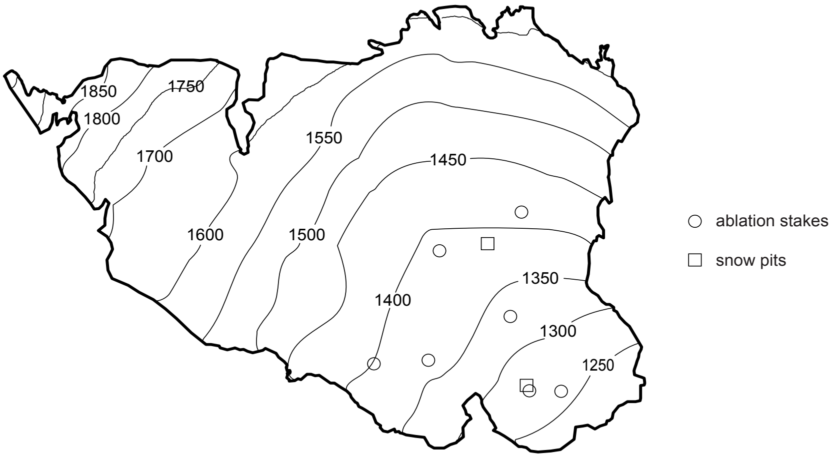
Glaciar de los Tres is a small, east-facing mountain glacier located on the normal ascent route to Mount Fitz Roy or Chaltén, the highest summit in the area (3,380 m a.s.l.). The valley has some well-preserved lateral and frontal moraines that surround the main proglacial lake, which are largely treeless and have not been dated yet but are tentatively attributed to the Little Ice Age (i.e. 17th–19th century). Glaciar de los Tres covers 0.81 km² and is 1.5 km long (2013), with an elevation range between 1,960 and 1,200 m a.s.l. The cirque is well defined and only shares a minor ice divide with Río Blanco Glacier, to the southwest. Mean annual air temperature at lake Ira, at the glacier front, is around 2.8 °C, with precipitation values ranging between 1,000 and 2,000 mm per year distributed throughout the year (IANIGLA-CONICET, 2016).

Glaciar de los Tres was selected for study by the Russian glaciologist Viktor Popovnin in the 1990s, after an extensive survey of the glaciers in the Las Vueltas river basin. His pioneering mass-balance observations ran from 1995 to 1998 and resulted in the first systematic measurements, with the glaciological method, of a glacier immediately east of the Southern Patagonian Icefield. Seasonal balances in 1995/96 varied between ± 2,500 mm w.e. and resulted in an almost steady-state balance of 70 mm w.e. (Popovnin et al., 1999). For the following two years, they reported annual balances of 650 and –280 mm w.e. (WGMS, 2001). In 2013, the measurements at Glaciar de los Tres were resumed under the auspices of the National Glacier Inventory of Argentina. The program includes seasonal glaciological mass balances, geodetic measurements, and hydro-meteorological data, which have been collected until present times. Recent geodetic mass-balance estimations indicate a –420 mm w.e. a^{-1} thickness change from 2000 to 2012, accelerating to –480 mm w.e. a^{-1} for the period from 2012 to 2018 (Dussaillant et al., 2019).

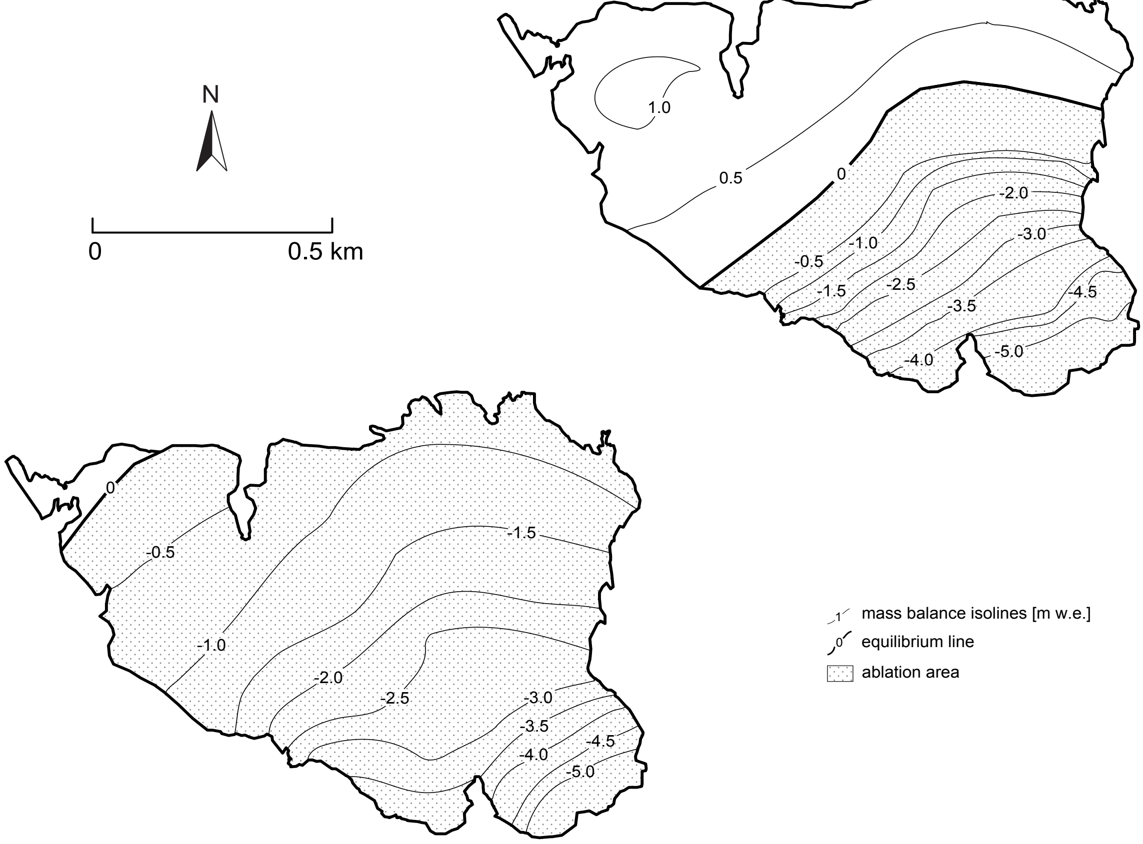
The glaciological mass balance data available for 2015/16 and 2016/17 are –673 and –1,767 mm w.e., respectively, which follow this negative trend, also observed in the majority of other glaciers in this region.

Figure 4.3.1 Topography and observation network and mass balance maps 2015/16 and 2016/17.

Topography and observational network



Mass balance maps 2015/16 and 2016/17



Glaciar de los Tres (ARGENTINA)

Figure 4.3.2 Mass balance versus elevation for 2015/16 and 2016/17.

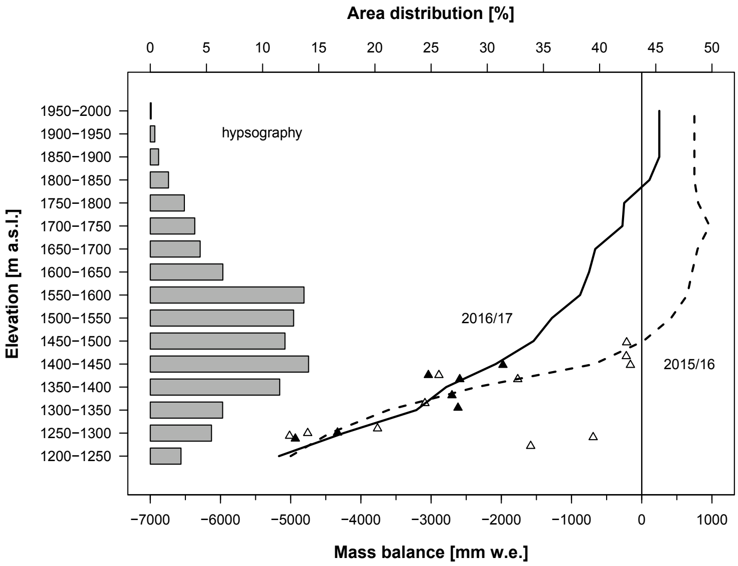


Figure 4.3.3 Glaciological balance versus geodetic balance for the whole observation period.

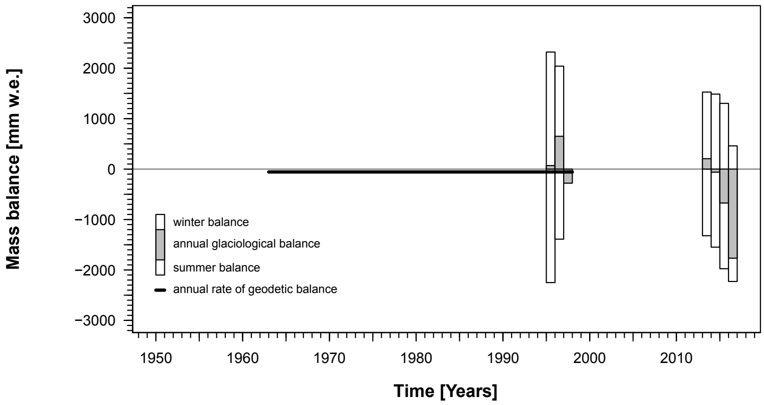
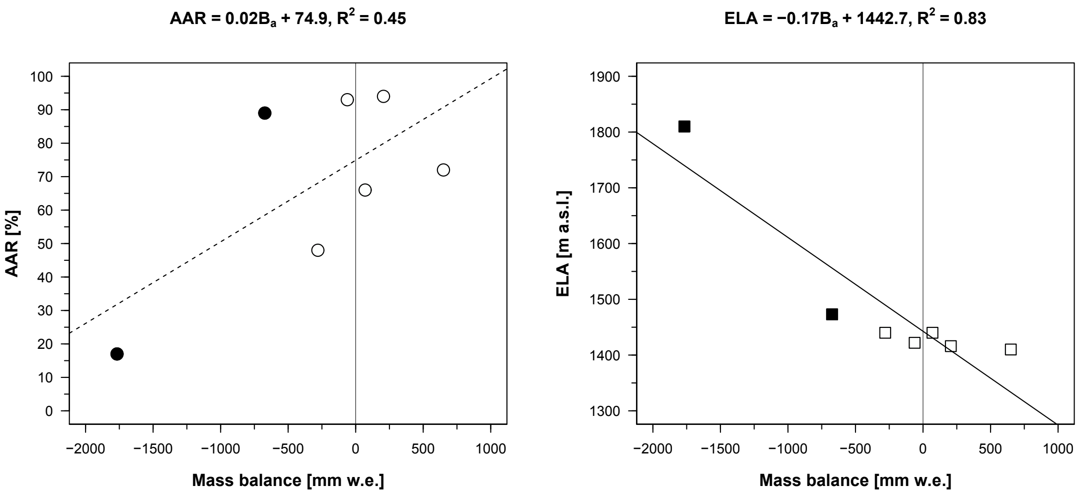


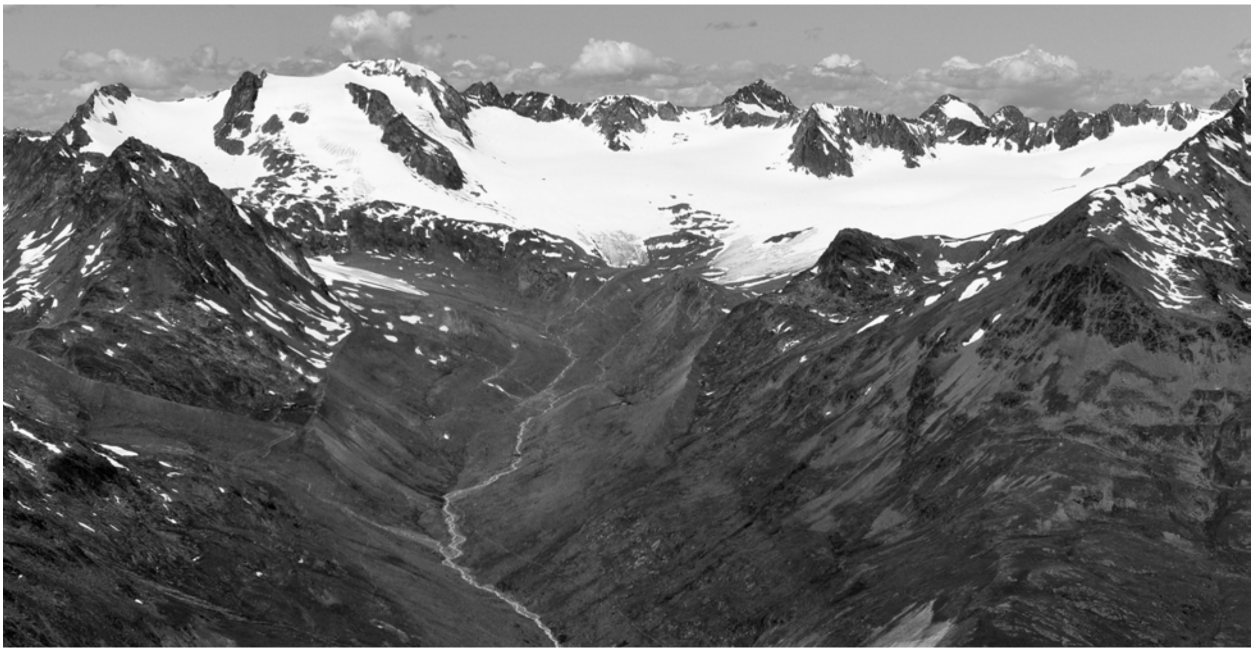
Figure 4.3.4 Accumulation area ratio (AAR) and equilibrium line altitude (ELA) versus specific mass balance for the whole observation period.



Glaciar de los Tres (ARGENTINA)

4.4 VERNAGTFERNER (AUSTRIA/ALPS)

COORDINATES: 46.52° N / 10.49° E



Vernagtferner from Kreuzspitze, 19 July 2016 (Geodesy and Glaciology, Bavarian Academy of Sciences and Humanities).

Vernagtferner, a rather flat temperate plateau glacier, is located in the southern part of the Ötztal Alps (Austria) near the main Alpine ridge. The present surface area of 7.08 km² (last aerial photogrammetric survey in September 2016) is unevenly distributed between 2,853 and 3,567 m a.s.l., with a mean elevation of 3,150 m a.s.l., and almost 78% of the total area lying between 3,000 and 3,300 m a.s.l.

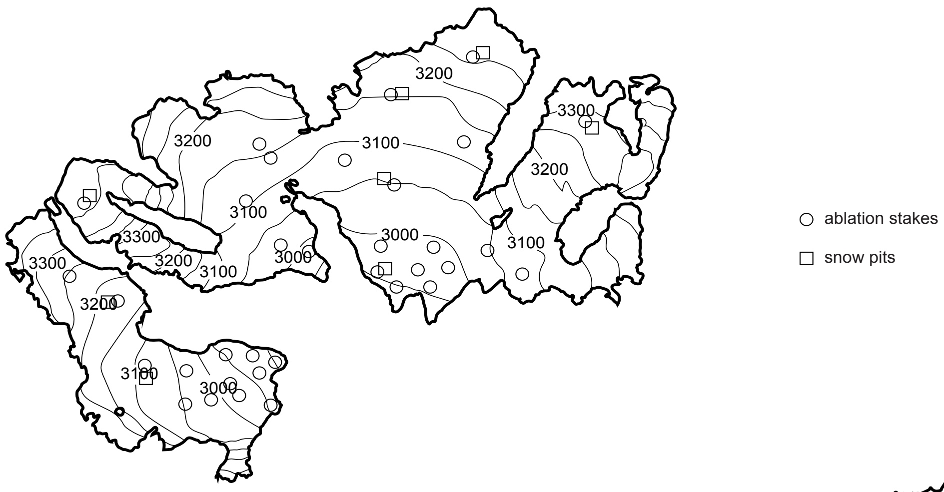
The mean annual air temperature at the equilibrium line altitude (for balanced years at 3083 m a.s.l.) lies between –3.5 and –4.5 °C, based on records at the Vernagt gauging station at 2,640 m a.s.l. and the Schwarzkögele climate station at 3,050 m a.s.l. The mean annual precipitation for the Vernagt drainage basin (11.4 km²) amounts to 1,550 mm, 60% of which are, on average, deposited during the accumulation season.

The glacier has been volumetrically monitored since 1889, direct glaciological measurements according to the fixed-date system have been conducted since 1965, and discharge measurements date back to 1974. Detailed glacier mass balance data are available on the homepage of the Geodesy and Glaciology group of the Bavarian Academy of Sciences and Humanities (www.glaziologie.de). Additionally, there are topographic maps at the 1:10,000 scale available, based on photogrammetric surveys for 1889, 1969, 1979, 1982, 1990, 1999, 2006, and 2016. A comprehensive summary of glaciological monitoring and research at Vernagtferner was published as thematic special issue of the Zeitschrift für Gletscherkunde and Glazialgeologie (Braun & Escher-Vetter, 2013).

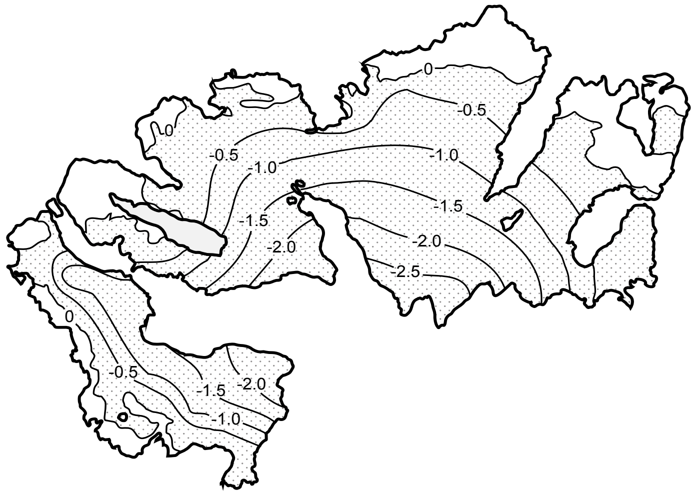
The year 2015/16 showed a slightly less negative mass balance (–781 mm w.e.) compared to the mean mass balance value since 2000 of –820 mm w.e. a^{-1}. The year 2016/17 resulted in the second (or third when considering preliminary values from 2017/18) most negative mass balance (–1,335 mm w.e.) since the beginning of the observations. Only 2002/03 was more negative with –2,133 mm w.e.

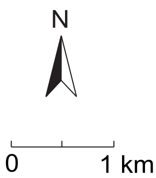
Figure 4.4.1 Topography and observation network and mass balance maps 2015/16 and 2016/17.

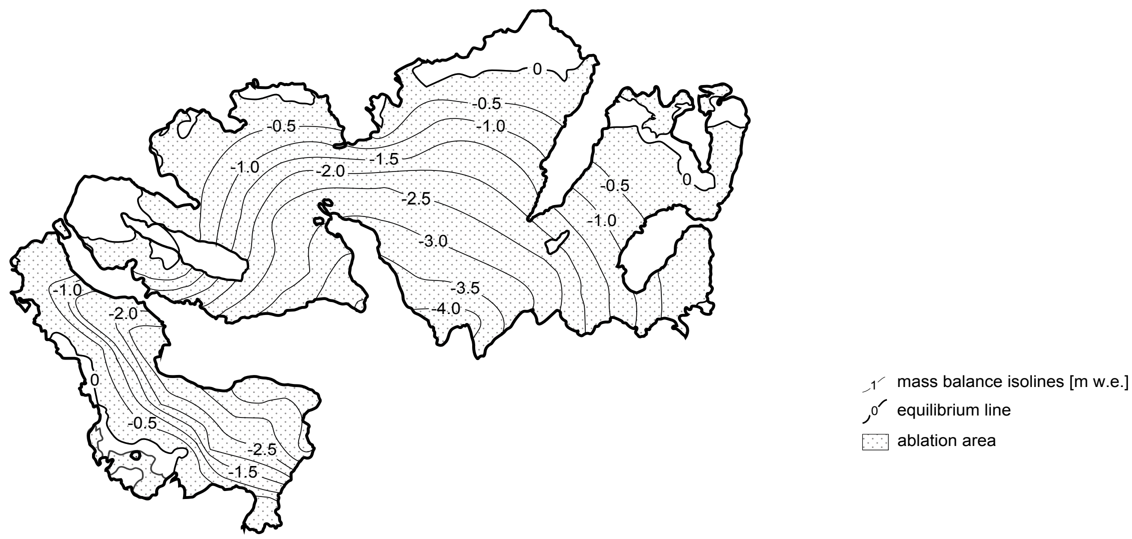
Topography and observational network



Mass balance maps 2015/16 and 2016/17







Vernagtferner (AUSTRIA)

Figure 4.4.2 Mass balance versus elevation for 2015/16 and 2016/17.

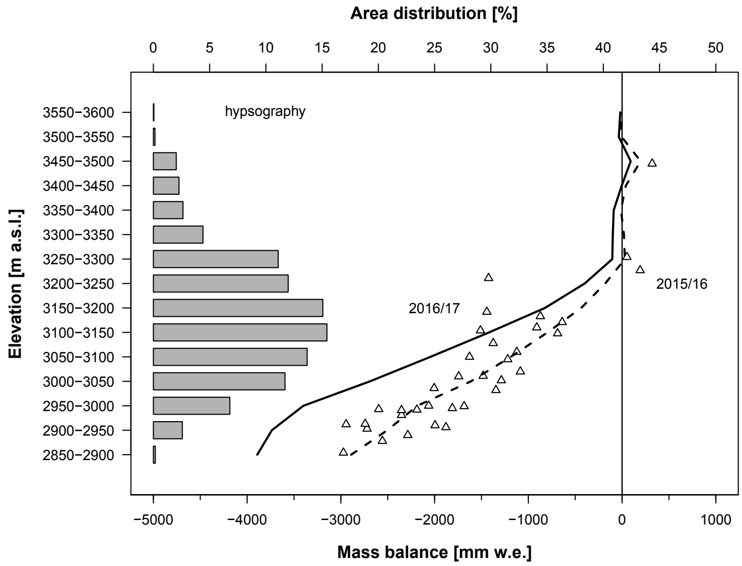


Figure 4.4.3 Glaciological balance versus geodetic balance for the whole observation period.

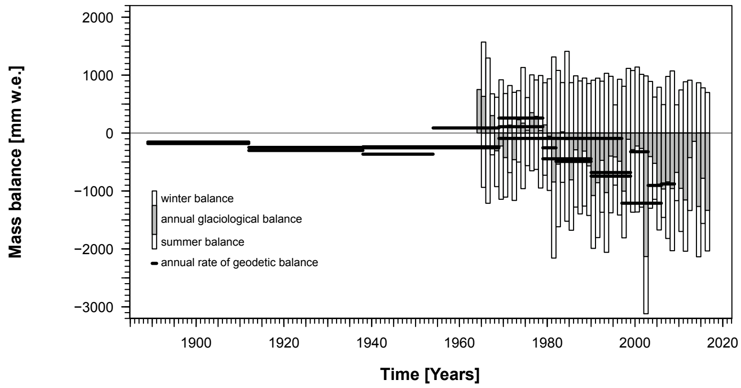
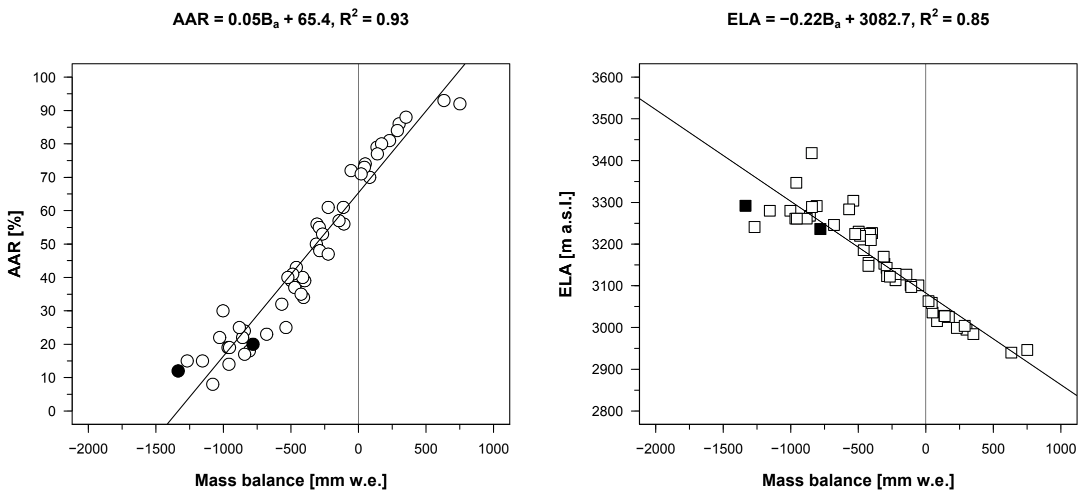
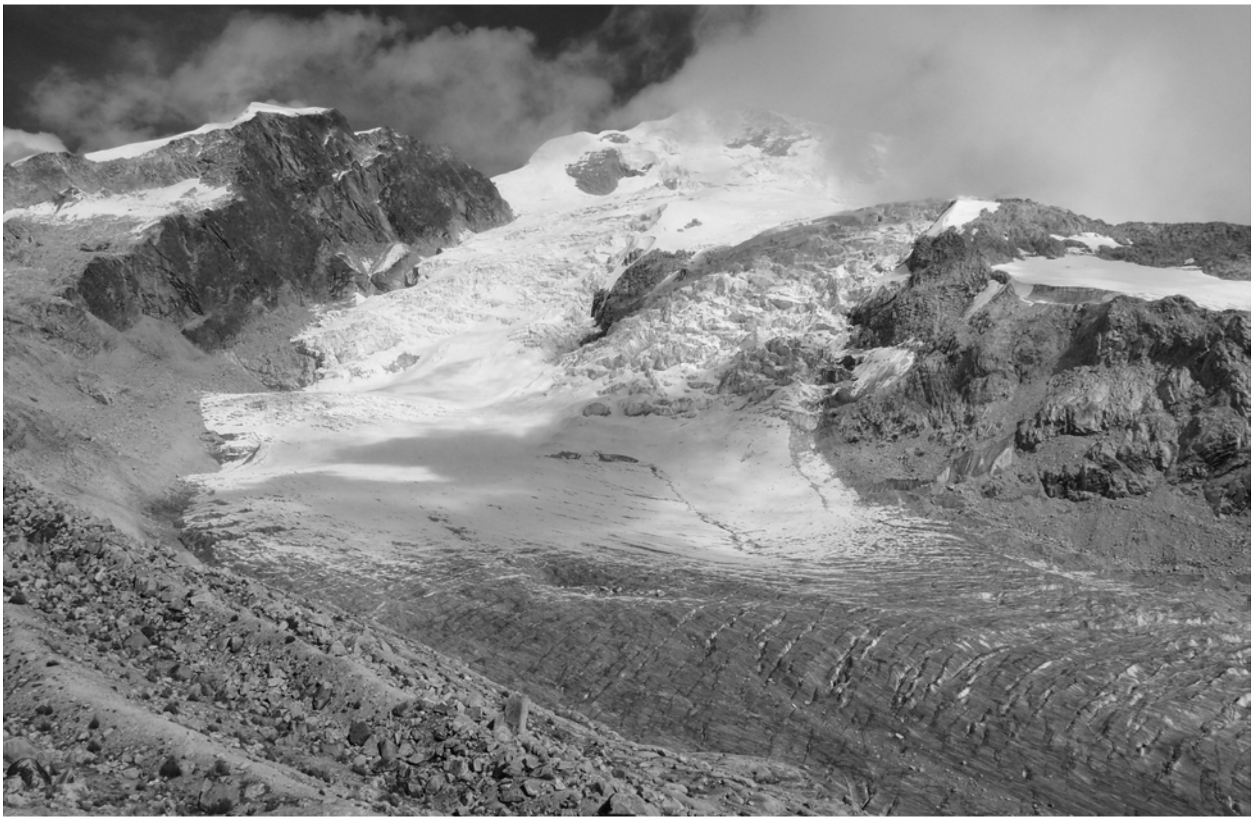


Figure 4.4.4 Accumulation area ratio (AAR) and equilibrium line altitude (ELA) versus specific mass balance for the whole observation period.



4.5 ZONGO (BOLIVIA/TROPICAL ANDES)

COORDINATES: 16.25° S / 68.17° W



Photograph taken by Alvaro Soruco, 2 June 2017.

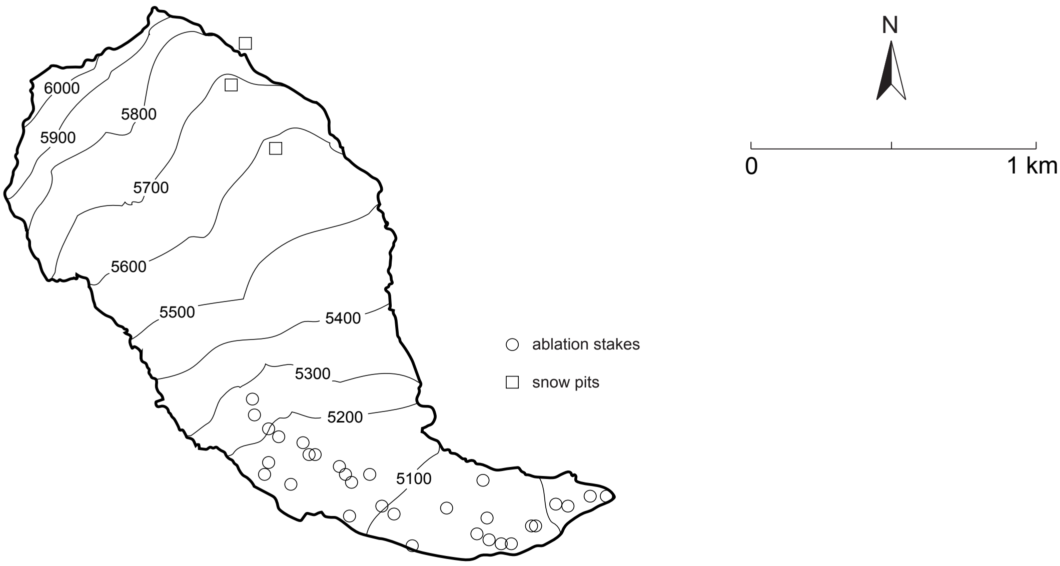
Zongo glacier is a small temperate valley glacier located at 30 km northeast of La Paz city. Its length is around 1.8 km and its width is around 0.75 km, flowing from 6,100 to 5,000 m a.s.l. The valley has a southern exposure in its upper part and a southeastern exposure in the lower one. Climate is characterized by one dry and one wet season, the latter occurring during the austral summer. Melting takes place mainly during the summer, reaching a peak in November, before the peak of precipitation, which take place between January and March.

As all glaciers in the region, Zongo glacier shows a negative mass balance. The few periods with positive mass balances were coincidental with La Niña events. The 2015/16 period presented a negative mass balance of –1,024 mm w.e. The 2016/17 period presented a slight negative mass balance of –237 mm w.e. The 2015/16 period was characterized by strong El Niño conditions at the end of 2015 and at the beginning of 2016 periods, afterwards El Niño conditions decreased during the rest of 2016 period. The 2016/17 period was characterized by a slight La Niña condition (showing less than one standard deviation). The biggest loss (–2,173 mm w.e.) took place during the El Niño event of 1997/98.

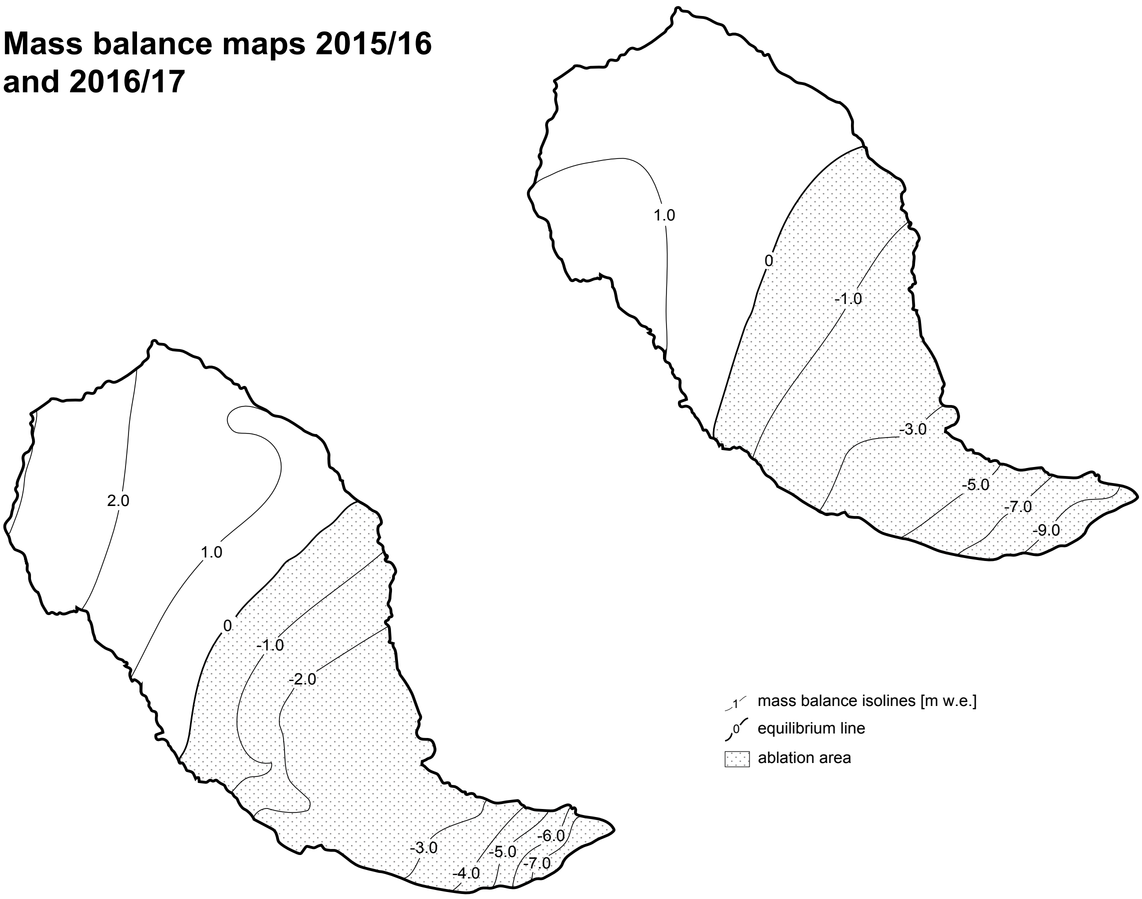
Glaciological and geodetic measurements of Zongo and other tropical glaciers were analyzed by Rabatel et al. (2013).

Figure 4.5.1 Topography and observation network and mass balance maps 2015/16 and 2016/17.

Topography and observational network



Mass balance maps 2015/16 and 2016/17



Zongo (BOLIVIA)

Figure 4.5.2 Mass balance versus elevation for 2015/16 and 2016/17.

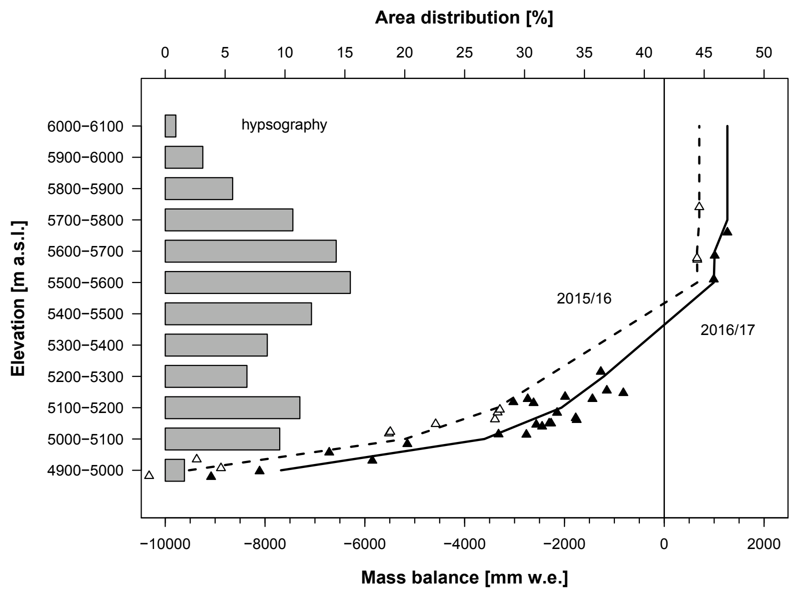


Figure 4.5.3 Glaciological balance versus geodetic balance for the whole observation period.

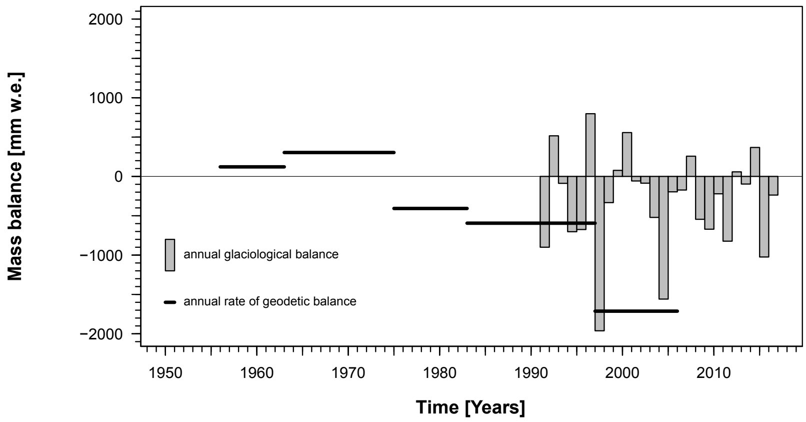
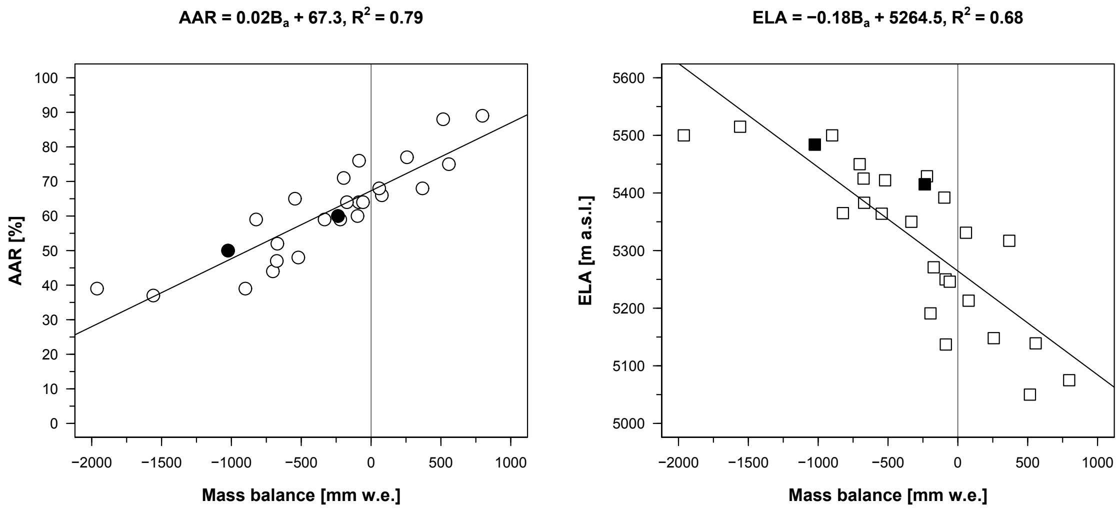


Figure 4.5.4 Accumulation area ratio (AAR) and equilibrium line altitude (ELA) versus specific mass balance for the whole observation period.



Zongo (BOLIVIA)

4.6 WHITE (CANADA/HIGH ARCTIC)

COORDINATES: 79.45° N / 90.67° W

Photograph taken by L. Thomson, 28 June 2014.

White Glacier is a 14 km long polythermal valley glacier located in the Expedition Fiord region of Axel Heiberg Island, Nunavut, Canada. The glacier has a 5 km wide accumulation area reaching a maximum elevation of 1,782 m a.s.l. and flows southeast into a narrow 0.8–1.1 km wide valley, terminating at a junction with Thompson Glacier to the east at an elevation of ~100 m a.s.l. Since the onset of mass-balance measurements in 1960, the glacier area has diminished by approximately 2.5 km^2 to 38.54 km^2 in 2014. The region experiences mean annual temperatures of about –20 °C and annual precipitation ranging from 58 mm at sea level (as measured at Eureka, 100 km to the east) to 370 mm at 2,120 m a.s.l. as measured in a 41-year snowpit record of annual accumulation on the Müller Ice Cap (Cogley et al., 1996). Over the period of observation (1960–2015), the average ELA was 1,075 m a.s.l. and the mean AAR was 55%. This indicates negative mass-balance conditions when compared to balanced-budget values (ELA_0 = 936 m a.s.l., AAR_0 = 70%).

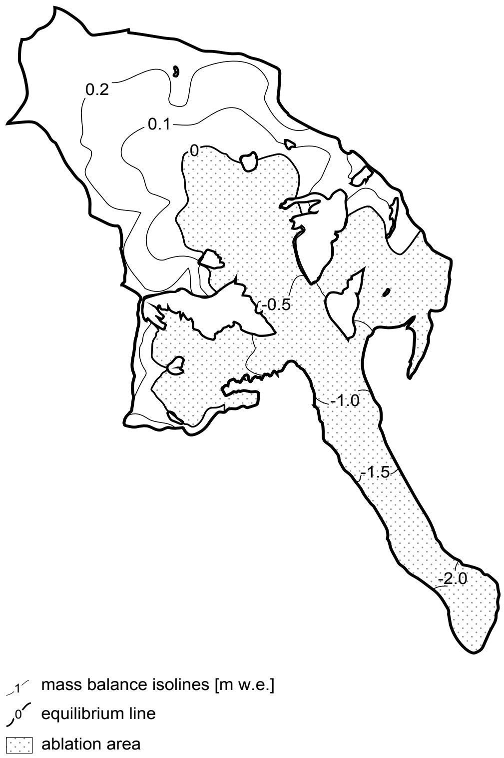
In July 2014 a photo survey was conducted by helicopter flying over White Glacier. Analysis of the resulting photographs using Structure from Motion methods led to the making of a new 1:10,000 topographic map of the glacier basin (Thomson & Copland, 2016). The new map supported the calculation of the glacier's geodetic mass and a re-analysis of the 54-year mass balance record, including updates to the mass balance calculations to account for thinning and retreat (Thomson et al., 2017).

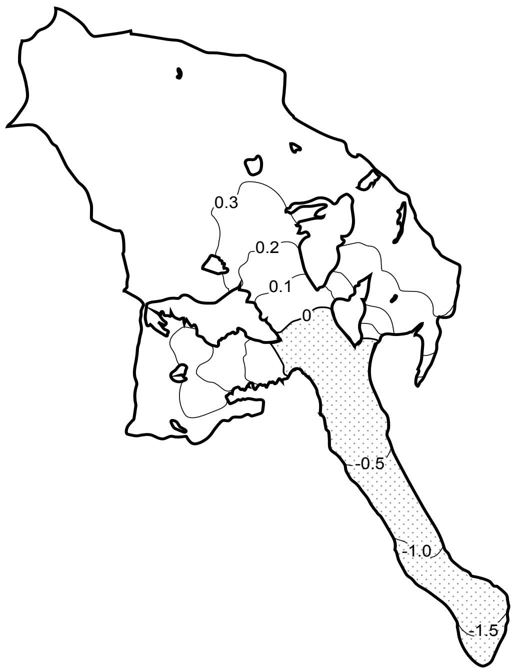
For the observation periods 2015/16 and 2016/17, White Glacier showed moderately negative (–268 mm w.e.) and positive (116 mm w.e.) balances.

Figure 4.6.1 Topography and observation network and mass balance maps 2015/16 and 2016/17.

Topography and observational network

Mass balance maps 2015/16 and 2016/17





White (CANADA)

Figure 4.6.2 Mass balance versus elevation for 2015/16 and 2016/17.

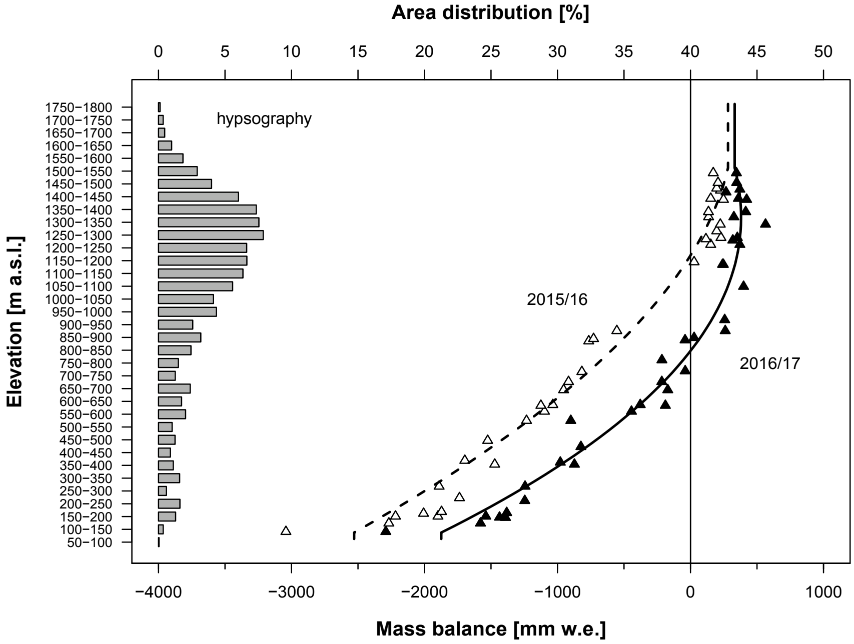


Figure 4.6.3 Glaciological balance versus geodetic balance for the whole observation period.

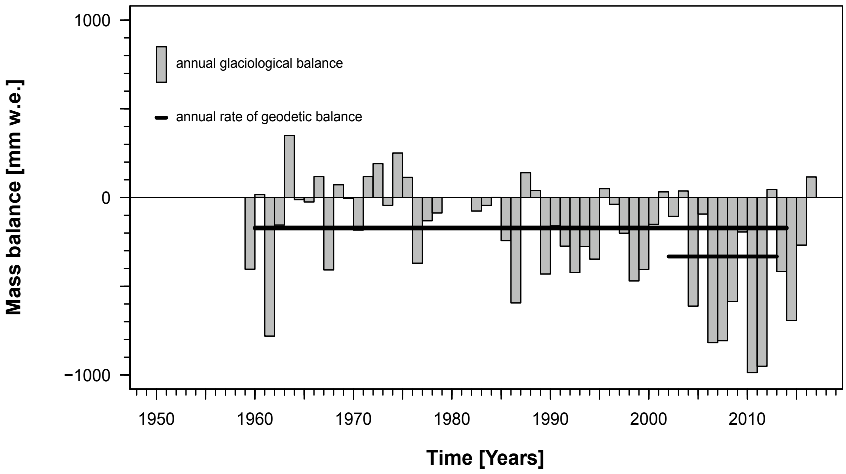
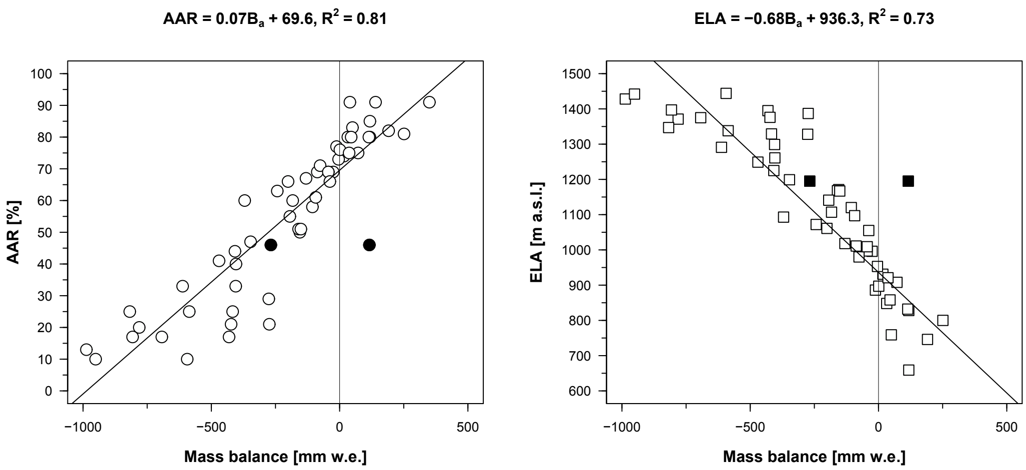


Figure 4.6.4 Accumulation area ratio (AAR) and equilibrium line altitude (ELA) versus specific mass balance for the whole observation period.



White (CANADA)

4.7 MOCHO GLACIER (CHILE/LAKE DISTRICT)

COORDINATES: 39.90° S / 72.00° W

Photo taken by M. Schaefer on 1 March 2016.

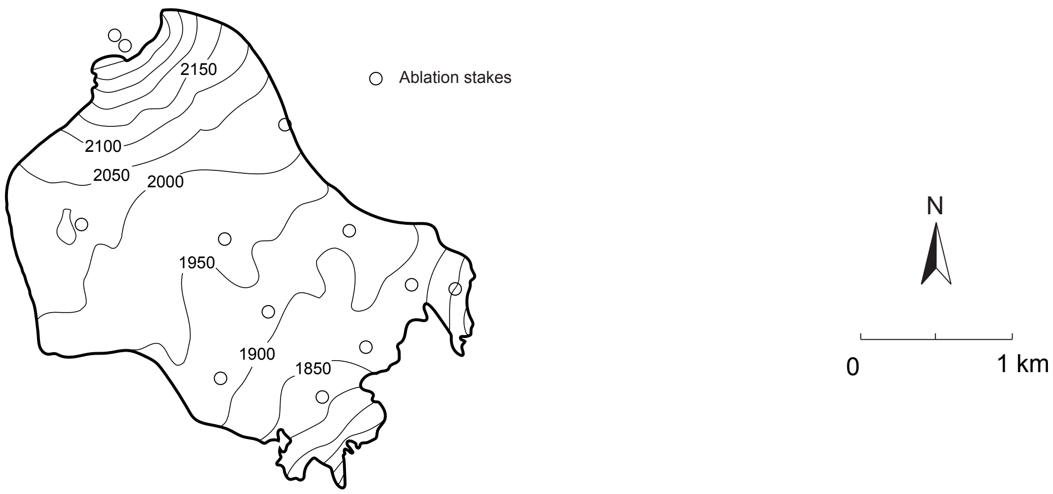
Mocho Glacier is defined as the south-east catchment of the ice cap which is covering the Mocho-Choshuenco volcanic complex. It is located in the Chilean Lake District in a relatively mild and humid climate. The annual mean temperature near the equilibrium line altitude is 2.6 °C and the mean annual precipitation measured at a nearby automatic weather station in the valley is 4,000 mm. In 2018, the Mocho-Choshuenco Ice Cap reduced its area by approximately 45% since 1976. Surface mass balance measurements on the Mocho Glacier started in 2003. Due to the high amount of snow accumulation during winter (>10 m), accumulation is measured at accumulation stakes, which have to be reinstalled several times during the winter and which also get lost from time to time.

The hydrological years 2015/16 (–1,319 mm w.e.) and 2016/17 (–2,469 mm w.e.) showed both very negative surface mass balance, with an ablation zone which comprised big parts of the glacier. 2015/16 is the most negative year on record to the present date, which can be explained for the most part by the extremely dry autumn/winter 2015 in the region.

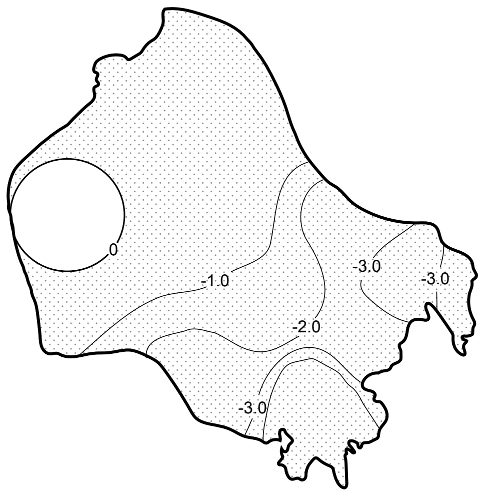
Apart from the surface mass balance monitoring programme, ground penetrating radar surveys were conducted, which showed ice depth of up to 250 meters (Geoestudios, 2014), the detailed energy balance was studied during a 50 day period in summer 2006 and several firn cores were extracted in order to study isotopic or biologic markers of the annual cycle in the snow and firn. Recent modeling efforts using the SICOPOLIS ice flow model project a strong reduction of the ice volume until 2060.

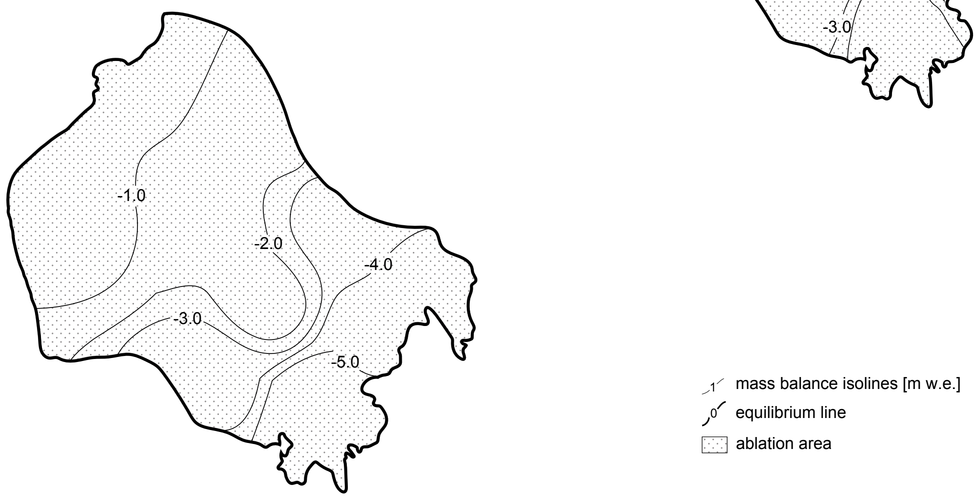
Figure 4.7.1 Topography and observation network and mass balance maps 2015/16 and 2016/17.

Topography and observational network



Mass balance maps 2015/16 and 2016/17





Mocho Glacier (CHILE)

Figure 4.7.2 Mass balance versus elevation for 2015/16 and 2016/17.

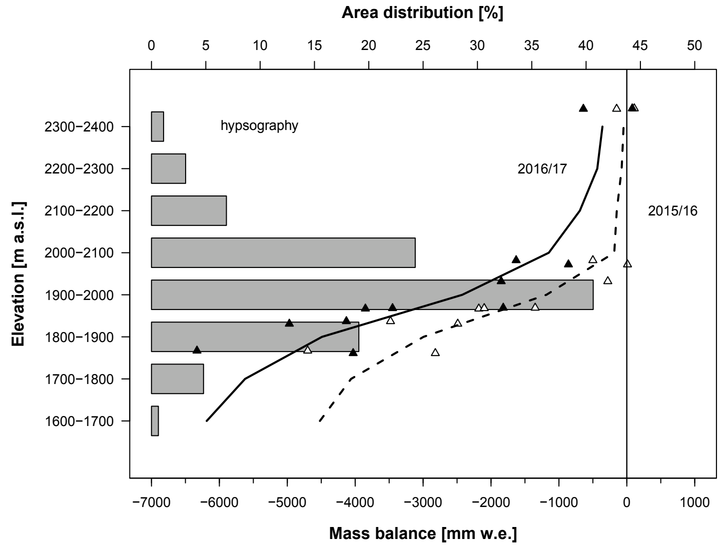


Figure 4.7.3 Glaciological balance versus geodetic balance for the whole observation period.

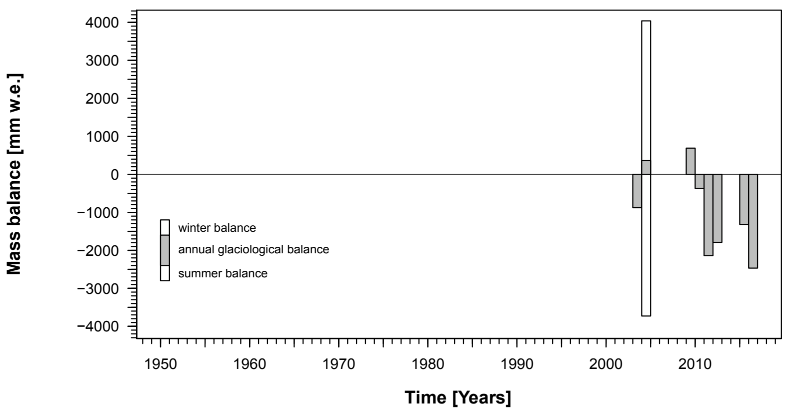
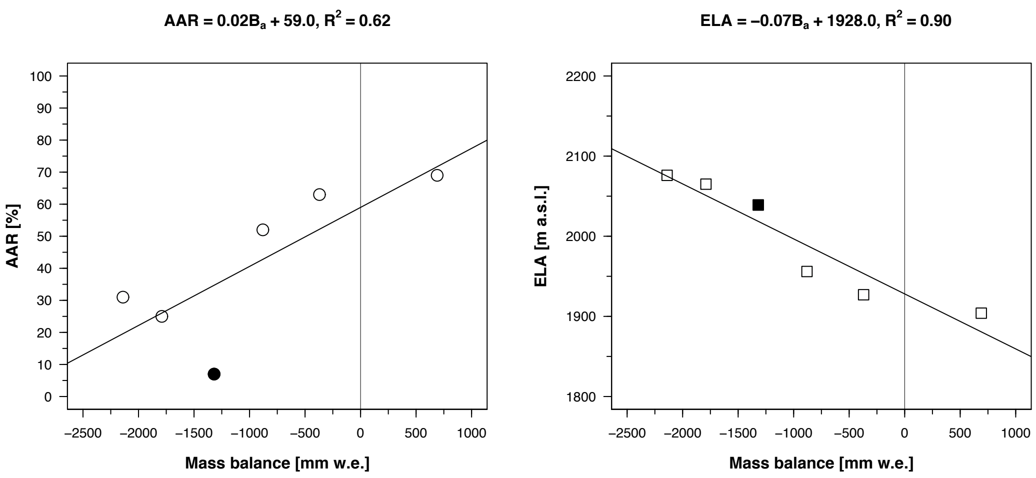


Figure 4.7.4 Accumulation area ratio (AAR) and equilibrium line altitude (ELA) versus specific mass balance for the whole observation period.



Mocho Glacier (CHILE)

4.8 URUMQI GLACIER NO. 1 (CHINA/TIEN SHAN)

COORDINATES: 43.08° N / 86.82° E

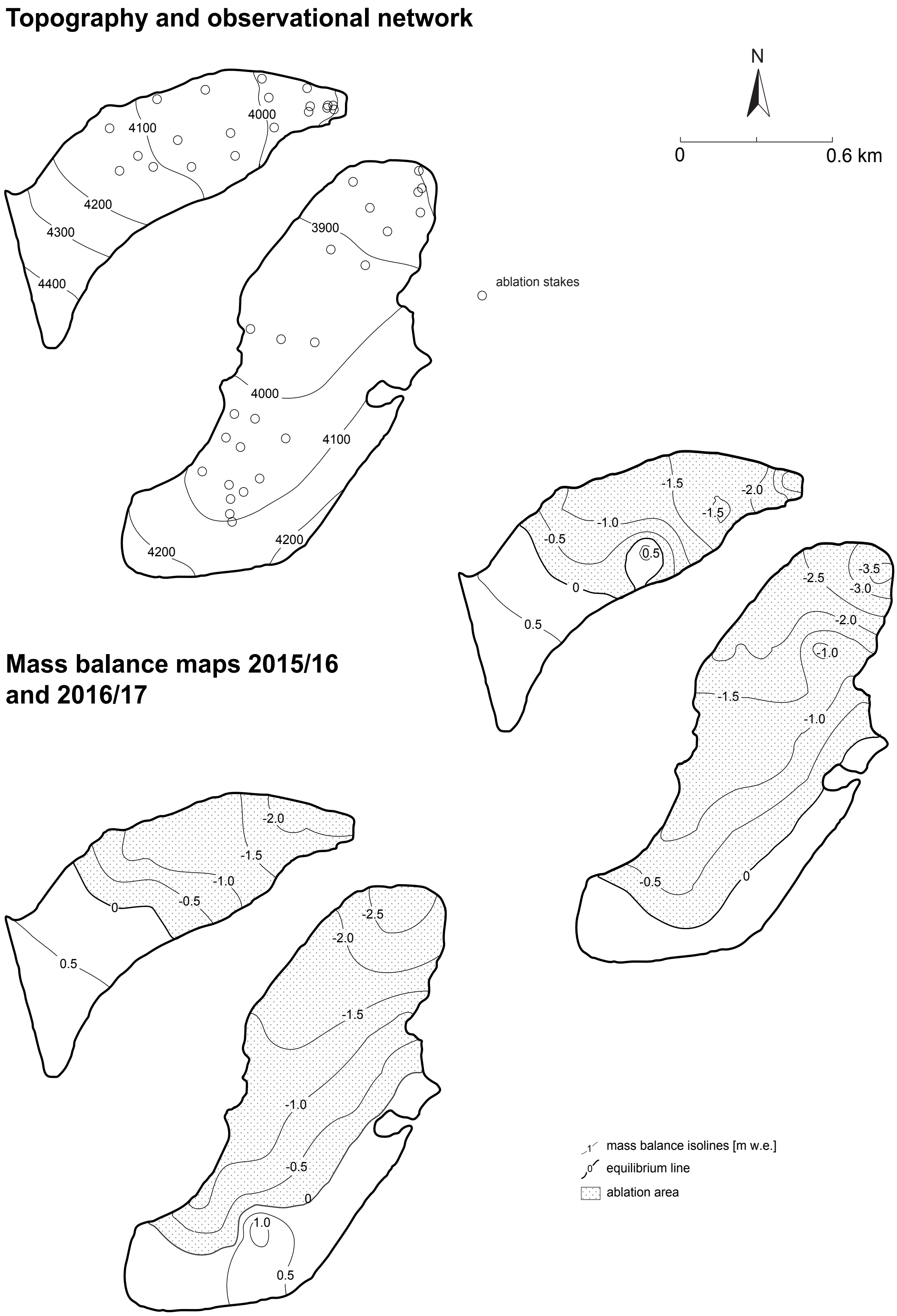
Photo taken by P. Wang in August 2017.

Urumqi Glacier No. 1 is a valley glacier located 100 km south of Urumqi city, northwest China. As in 1959, the starting date of observation on Urumqi Glacier No. 1, it was composed by two branches. After decades of constant recession, the two branches separated into two small glaciers in 1993, which are now referred to as the east and west branches of Urumqi Glacier No. 1. The area of the glacier was determined by a survey in 2012 as being 1.021 km^2 for the east branch and 0.573 km^2 for the west branch. The latest radar echo-sounding measurements were conducted on the glacier in August 2012, which indicated its maximum thickness as 124.0 ± 5 m.

For Urumqi Glacier No. 1, accumulation and ablation both take place primarily during the warm season. For the 2015/16 and 2016/17 mass balance years (2015.9.1–2016.8.31 and 2016.9.1–2017.8.31), the total precipitation observed at the nearby meteorological station (Daxigou Meteorological Station, 3,539 m a.s.l.) was 613 mm and 571 mm, respectively; mean annual air temperature was –3.7 °C and –3.8 °C, respectively. Corresponding mean air temperature and precipitation at ELA for 2015/16 was evaluated as ~ –7.7 °C (with lapse rate as –0.0065 °C m^{-1}) and ~911 mm (with vertical gradient as 22 mm 100 m^{-1} in non-glaciated area and 10% 100 m^{-1} on the glacier surface), respectively. For 2016/17, corresponding values were –7.7 °C and ~844 mm, respectively.

The mass balances of Urumqi Glacier No. 1 were negative in 2015/16 and 2016/17, i.e. –780 and –682 mm w.e., respectively. To obtain the glacier-wide mass balance, the specific value observed at each stake was used for interpolation, together with simulated values obtained using the simple energy balance model (Oerlemans, 2011) in areas without measurements.

Figure 4.8.1 Topography and observation network and mass balance maps 2015/16 and 2016/17.



Urumqi Glacier No. 1 (CHINA)

Figure 4.8.2 Mass balance versus elevation for 2015/16 and 2016/17, West Branch on the left and East Branch on the right.

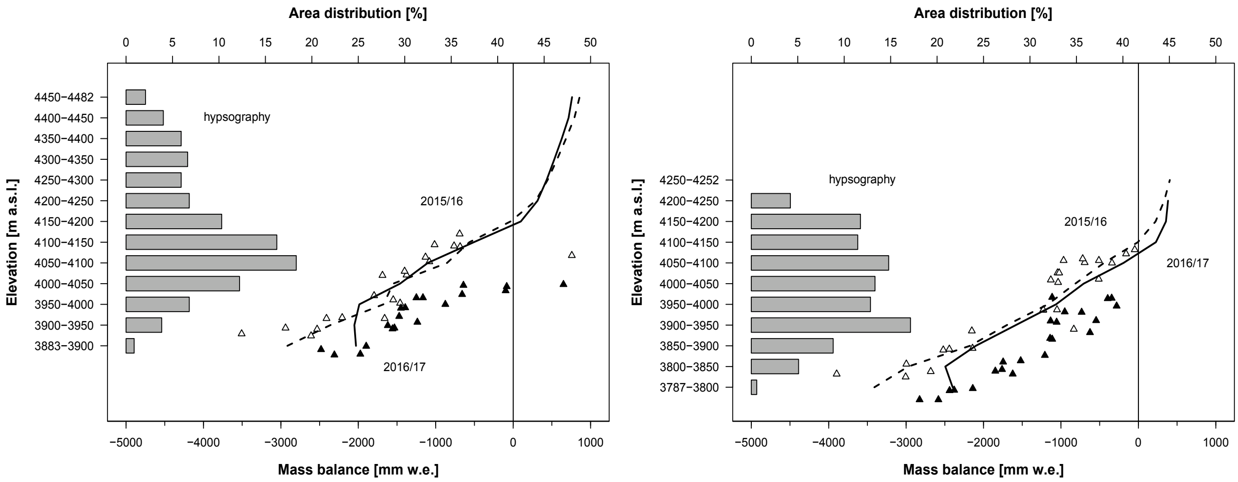


Figure 4.8.3 Glaciological balance versus geodetic balance for the whole observation period.

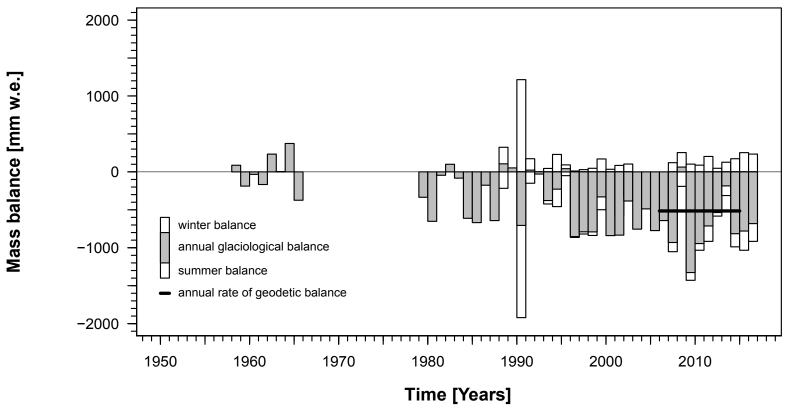
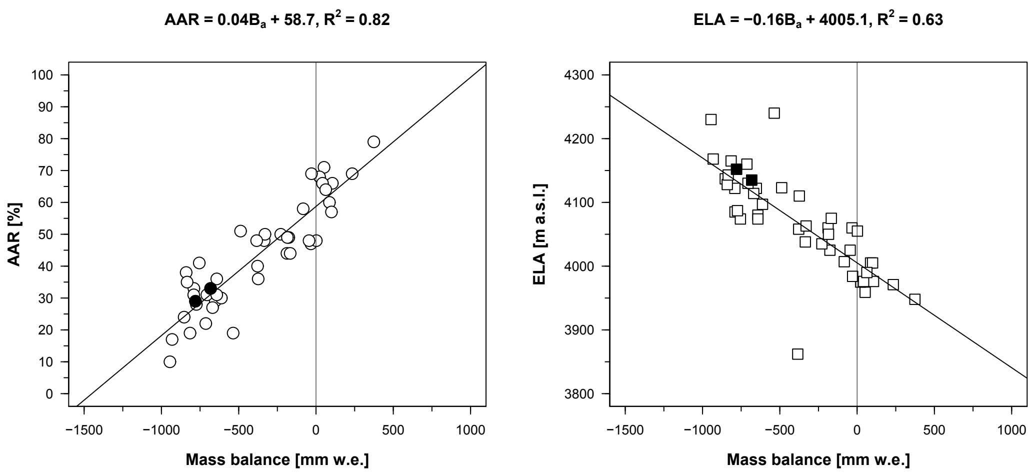


Figure 4.8.4 Accumulation area ratio (AAR) and equilibrium line altitude (ELA) versus specific mass balance for the whole observation period.



4.9 PARLUNG NO. 94 (CHINA/SOUTHEAST TIBETAN PLATEAU)

COORDINATES: 29.23° N / 96.59° E

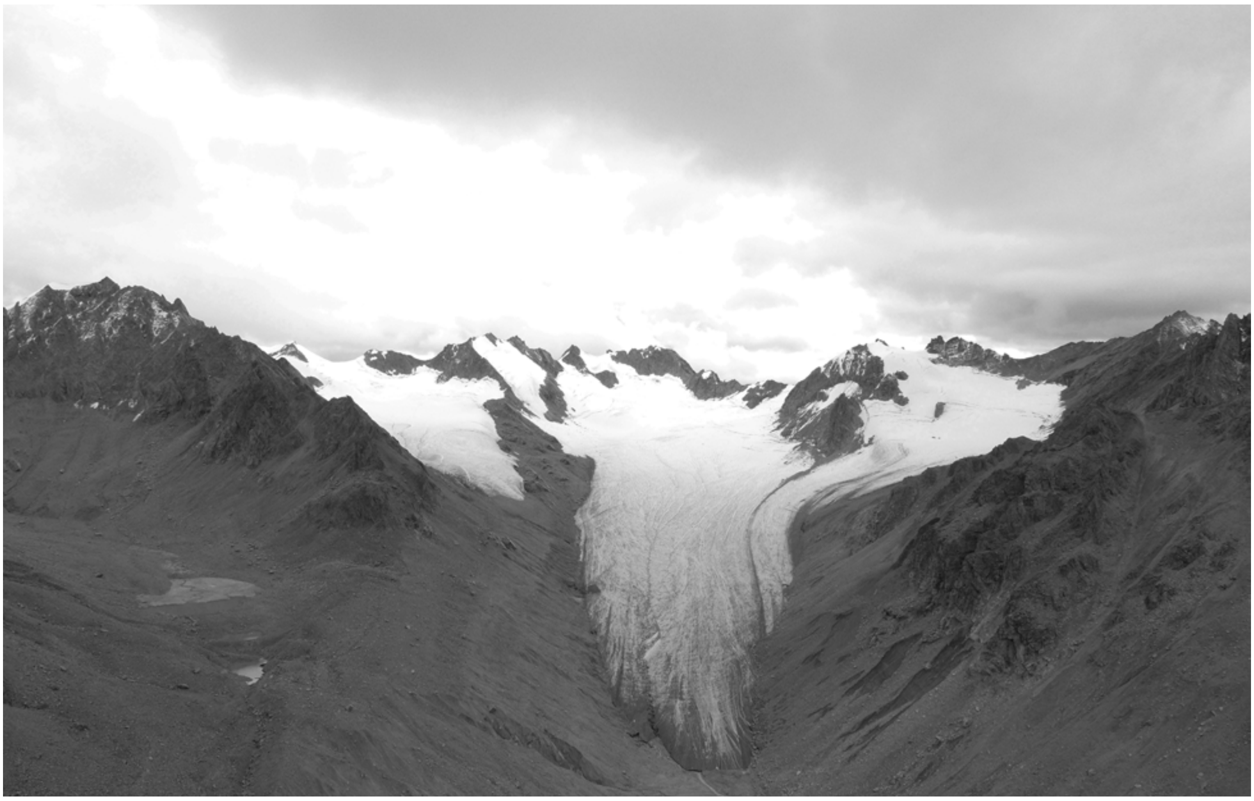


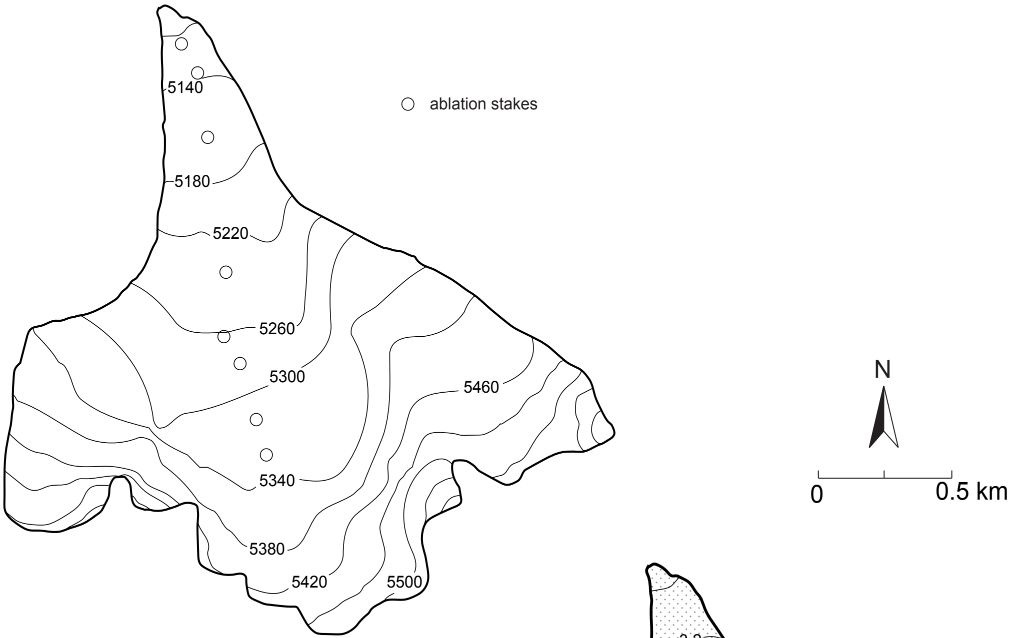
Photo taken by W. Yang in September 2018.

Parlung No.94 Glacier is located within the headwaters of the Parlung Zangbo River, a tributary of the Brahmaputra River on southeastern Tibetan Plateau. It is a typical valley glacier with an area of 2.4 km^2 and an axis length of nearly 2.9 km. It flows northwestward from elevation of 5,635 to 5,075 m a.s.l. at its front position. Mean annual air temperature at the equilibrium line of the glacier varied from –7.4 to –6.7 °C and annual total precipitation varied from 1,278 to 1,129 mm based on the past two years AWS and rainfall observation. Both the mass balance observations and simulations reveal that the mass accumulation of this glacier occurred primarily in the boreal spring, thus named as “spring accumulation type” glacier.

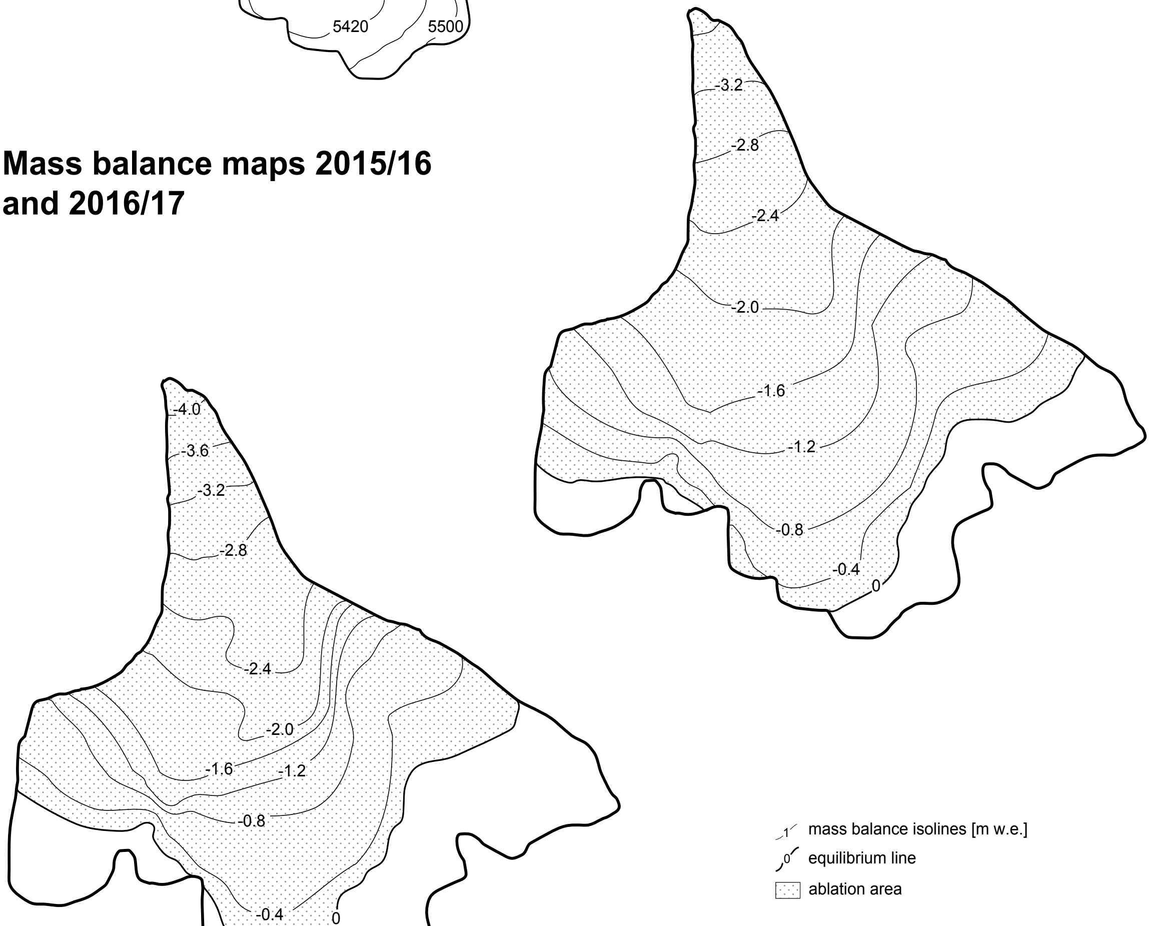
The mass balance has been measured using the glaciological method since 2005/06. The cumulative mass balance of Parlung No. 94 from 2005/06 to 2014/15 was –10,472 mm w.e. Mean annual ELA was 5,411 m a.s.l. The mass balances in 2015/16 and 2016/17 were negative (–1,086 and –959 mm w.e.), with ELA of 5,448 and 5,407 m a.s.l. and AAR of 17 and 28%, respectively.

Figure 4.9.1 Topography and observation network and mass balance maps 2015/16 and 2016/17.

Topography and observational network



Mass balance maps 2015/16 and 2016/17



Parlung No. 94 (CHINA)

Figure 4.9.2 Mass balance versus elevation for 2015/16 and 2016/17.

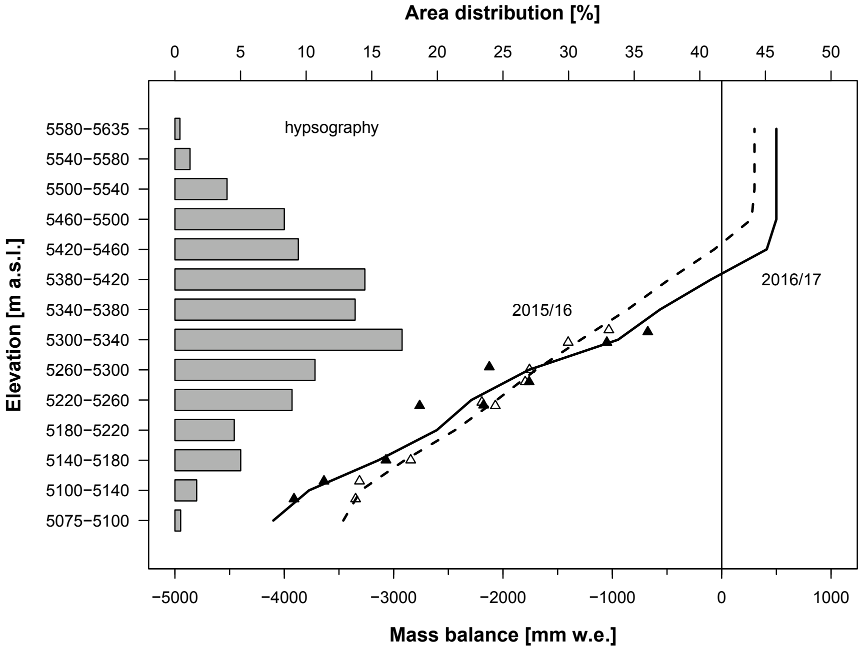


Figure 4.9.3 Glaciological balance versus geodetic balance for the whole observation period.

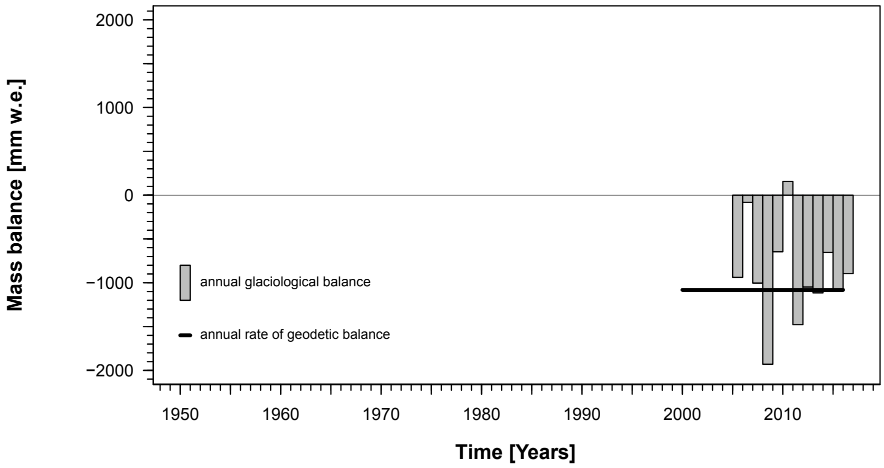
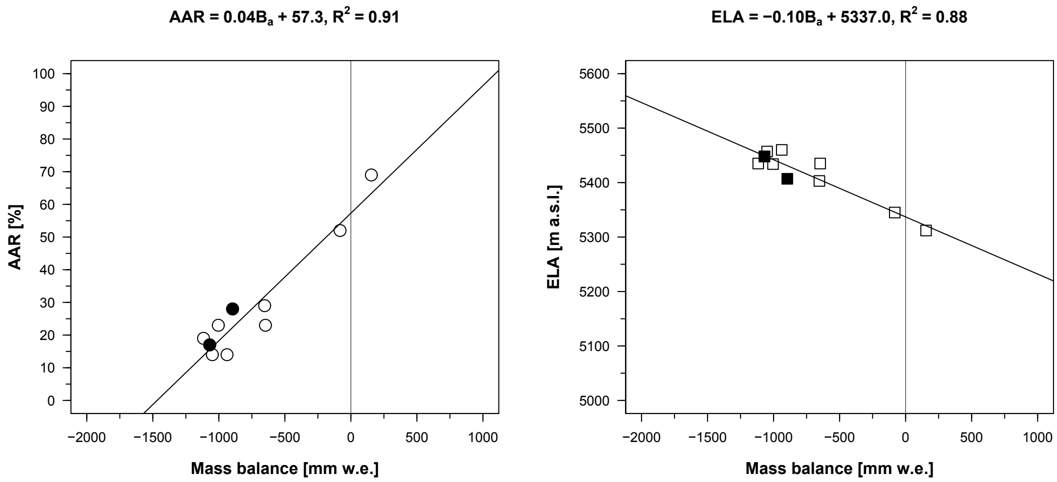


Figure 4.9.4 Accumulation area ratio (AAR) and equilibrium line altitude (ELA) versus specific mass balance for the whole observation period.



Parlung No. 94 (CHINA)

4.10 CONEJERAS (COLOMBIA/CORDILLERA CENTRAL)

COORDINATES: 4.82° N / 75.37° W

Photo taken by J.L. Ceballos on 13 December 2017.

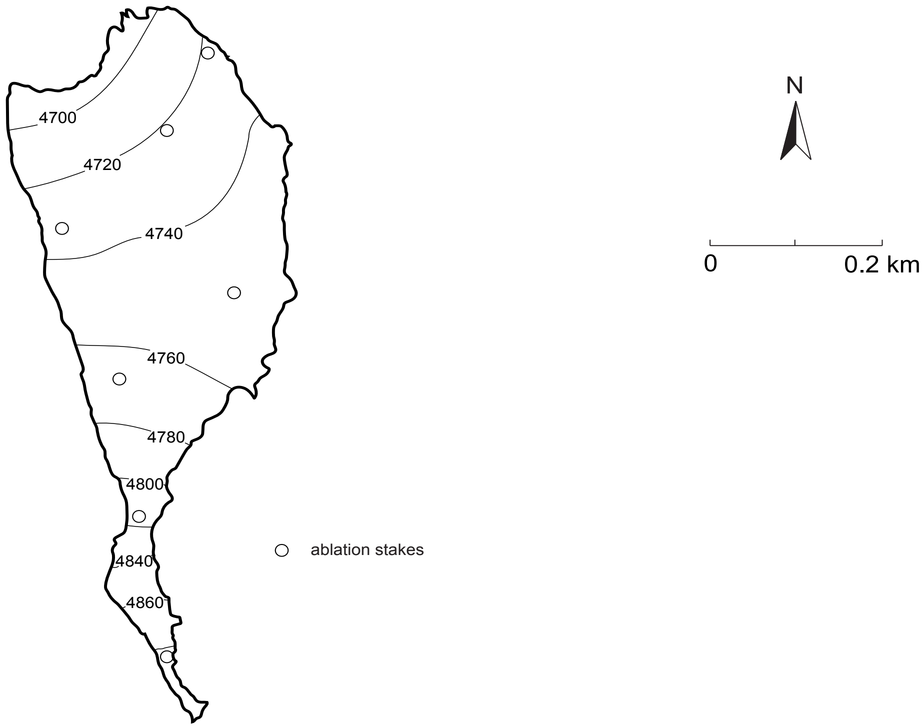
Conejeras Glacier is a small glacier (0.14 km², 2017) and part of the ice cap (0.66 km², 2017) located at the top of Santa Isabel glacier-volcano in the northern Andes. Along with the glacierized volcanos Nevado del Ruiz and Nevado del Tolima, it is surrounded by the "Páramo" ecosystem and Andean forests. Conejeras, which has a minimum elevation of 4,680 m a.s.l. and a maximum of 4,910 m a.s.l. is situated to the northwest of Santa Isabel.

Conejeras mass balance has been calculated monthly with the direct glaciological method since April 2006: field measurements using 14 stakes distributed along the glacier every 50 m of altitude; six of them located at the lower glacier, could no longer be monitored due to glacier retreat. Mass balance calculation also has been supplemented by ten meteorological and hydrological stations, extending downvalley to 2,700 m a.s.l. to support research on high mountain systems. Since 2006, Conejeras Glacier has shown a permanently negative mass balance (with cumulative loss of –38 m w.e).

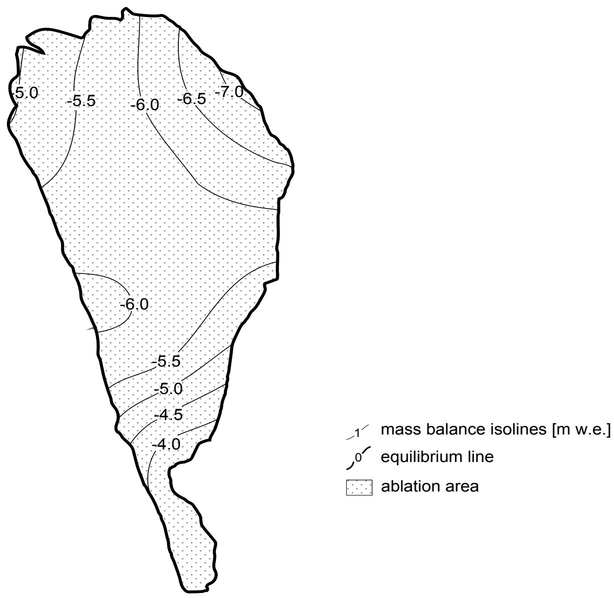
The mass balance was –5,545 mm w.e. in 2015/16 and –4,265 mm w.e. in 2016/17. The (theoretical) ELA was located at 4,984 m a.s.l (AAR < 1%) and 4,916 m a.s.l. (AAR < 1%) by the end of 2016 and 2017, respectively. The glacier reacts swiftly to atmospheric changes and is strongly influenced by climatic variability generated by the Intertropical Convergence Zone (ITCZ) and the El Niño-Southern Oscillation (ENSO), which impacted this glacier from late 2015 to early 2016. The recent appearance of volcanic ash on its surface is another important factor that influences its melting. Weather patterns in these mountains lead to an annual average precipitation of 1,115 mm (2010–2015), 93% relative humidity on average, and a mean temperature range between –0.9 ºC and +3.3 °C (2011–2016). The maximum ice thickness is estimated at 30 m, located in the lower range (2017).

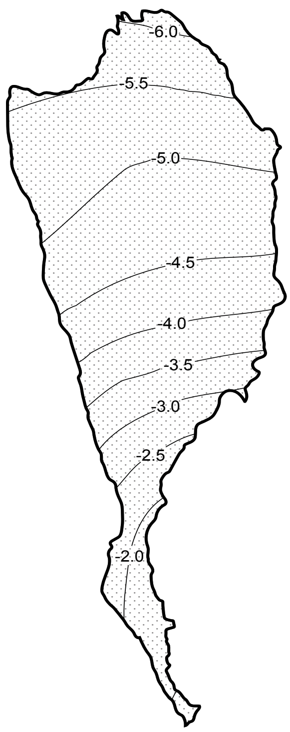
Figure 4.10.1 Topography and observation network and mass balance maps of 2015/16 and 2016/17.

Topography and observational network



Mass balance maps 2015/16 and 2016/17





Conejeras (COLOMBIA)

Figure 4.10.2 Mass balance versus elevation for 2015/16 and 2016/17.

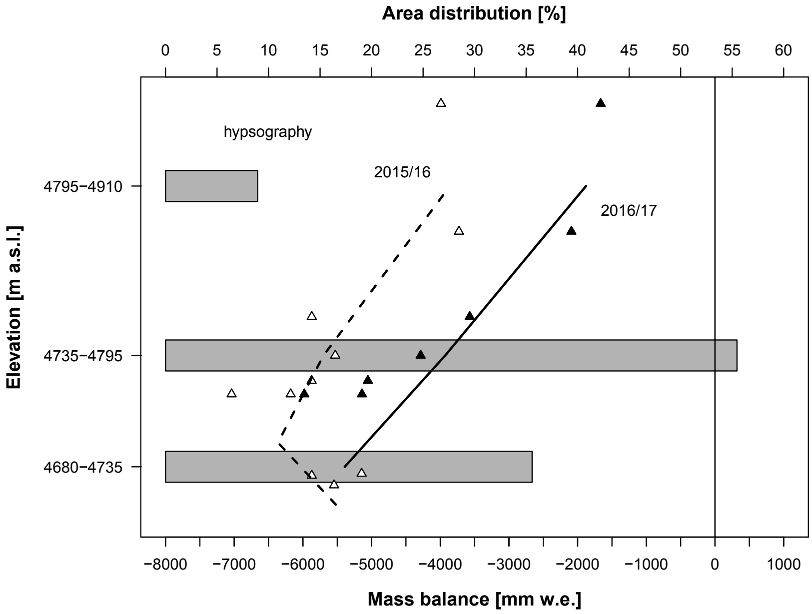


Figure 4.10.3 Glaciological balance versus geodetic balance for the whole observation period.

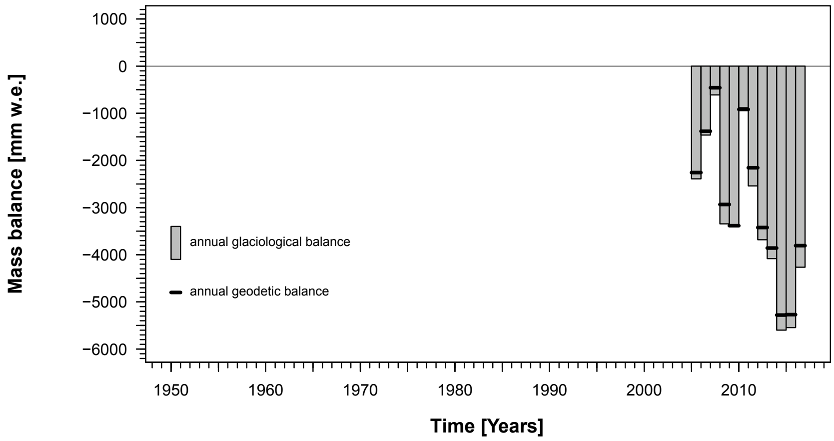
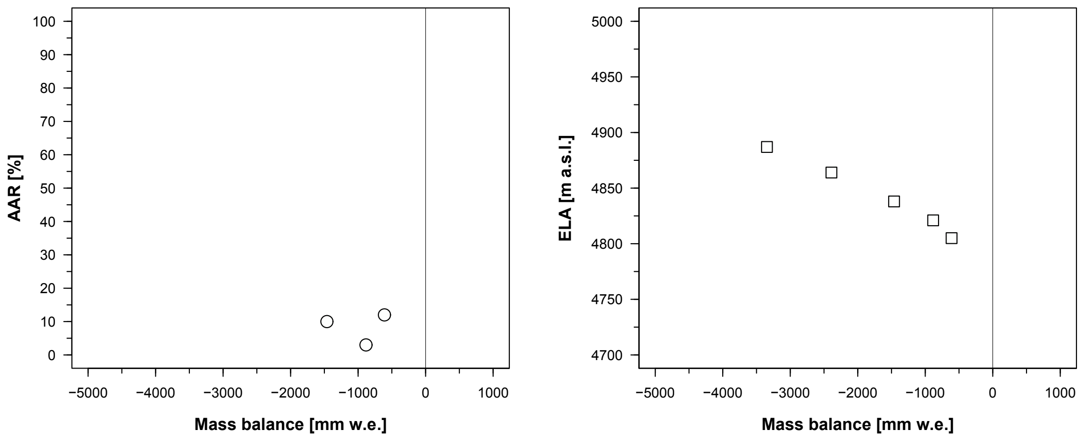


Figure 4.10.4 Accumulation area ratio (AAR) and equilibrium line altitude (ELA) versus specific mass balance for the whole observation period.



4.11 QASIGIANNGUIT (GREENLAND/SOUTHWEST GREENLAND)

COORDINATES: 64.16° N / 51.35° W

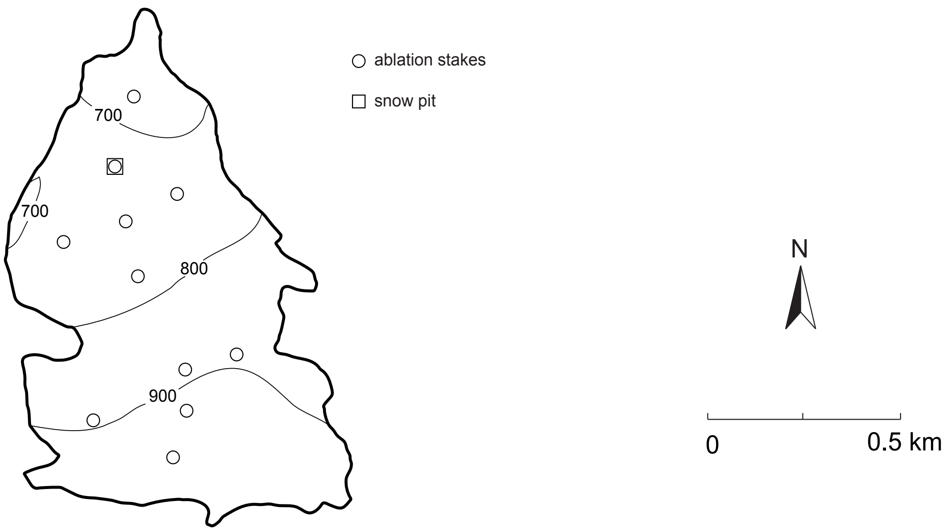
Photo taken from an automatic time lapse camera.

Qasigiannguit Glacier is a small mountain glacier situated in Kobbefjord, southwest Greenland, just 18 km east of the capital Nuuk. It is a north facing glacier with a surface area of 0.7 km^2 spanning an elevation range from 680 to 1,000 m a.s.l. A GPR survey in 2014 revealed a maximum ice thickness of almost 70 m, and mainly cold-based ice, with temperate ice near the bed at the thickest ice sections. This glacier represents one of currently five active mass-balance programmes on peripheral glaciers and ice caps in Greenland. The mass balance measurements started with a stake network in 2012/13 and in 2014 an AWS station was added.

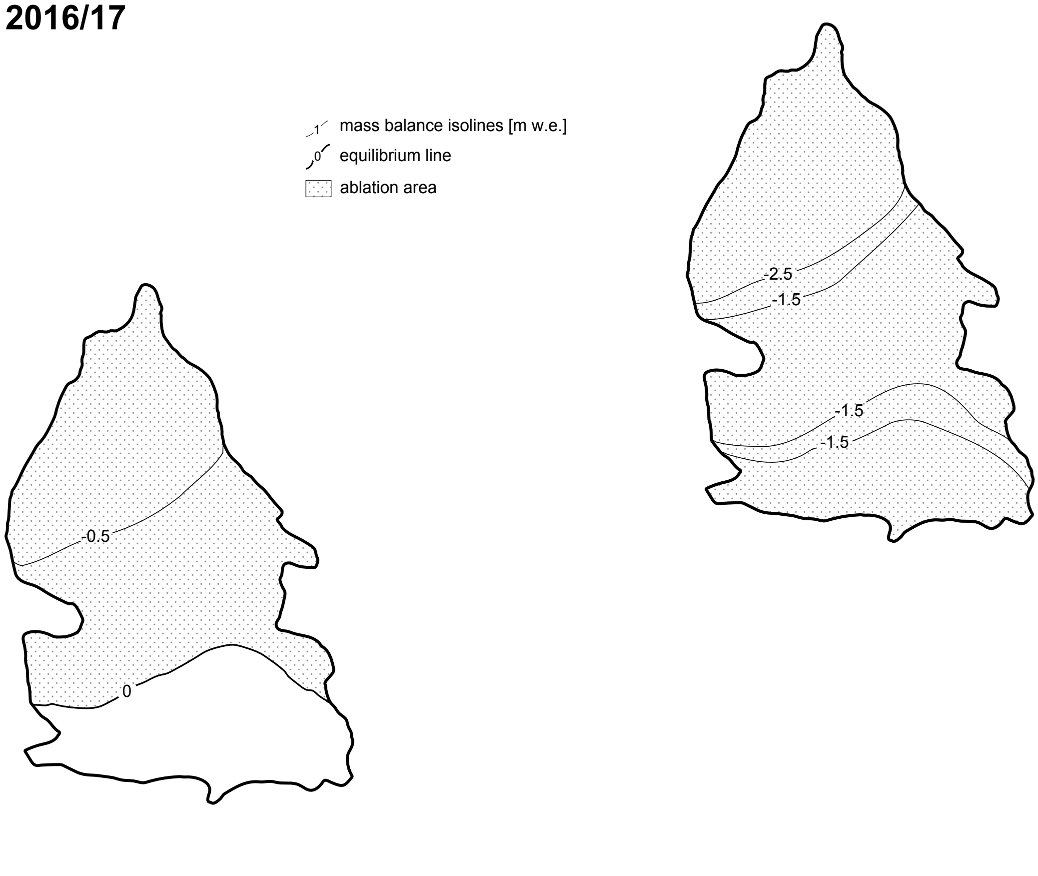
The annual surface mass balance of 2015/16 and 2016/17 were both negative. 2015/16 was the most negative recorded so far for the glacier with –1,565 mm w.e. and an ELA above the glacier (AAR = 0%). 2016/17 was less negative with –51 mm w.e. and an ELA at 900 m a.s.l. (AAR = 50%).

Figure 4.11.1 Topography and observation network and mass balance maps of 2015/16 and 2016/17.

Topography and observational network



Mass balance maps 2015/16 and 2016/17



Qasigiannguit (GREENLAND)

Figure 4.11.2 Mass balance versus elevation for 2015/16 and 2016/17.

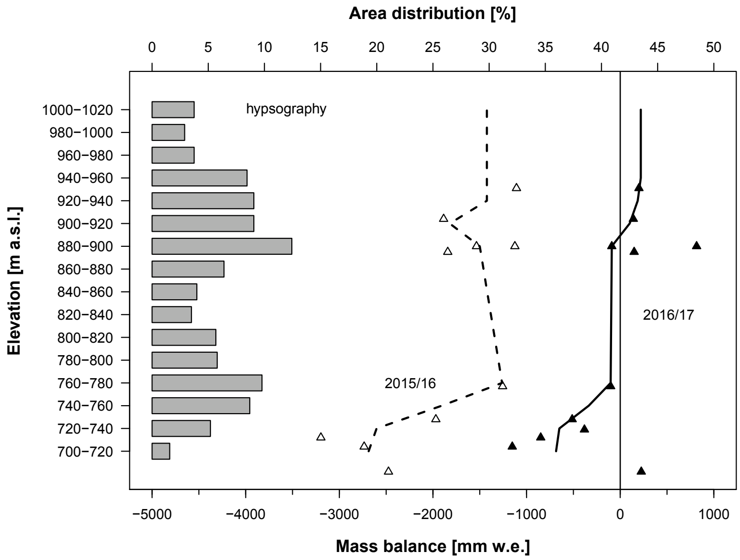


Figure 4.11.3 Glaciological balance versus geodetic balance for the whole observation period.

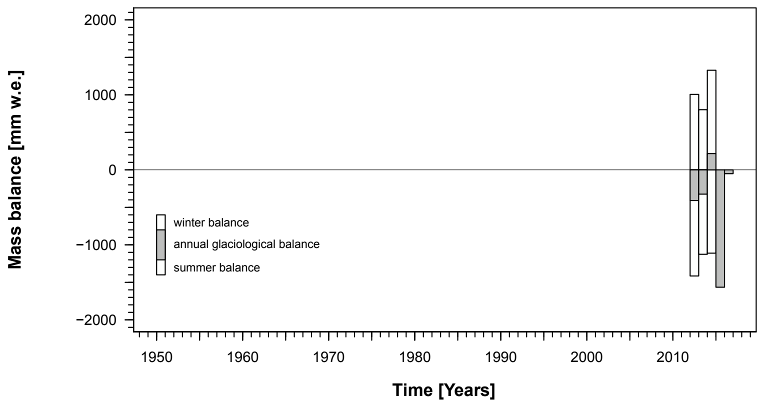
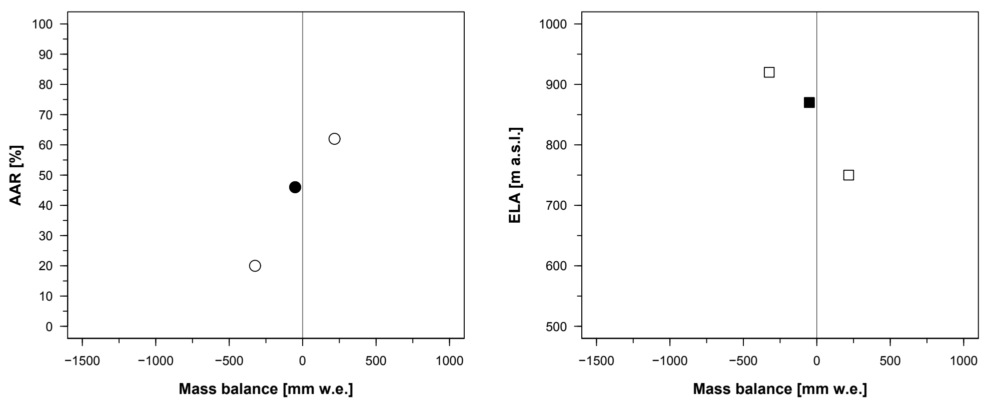


Figure 4.11.4 Accumulation area ratio (AAR) and equilibrium line altitude (ELA) versus specific mass balance for the whole observation period.



Qasigiannguit (GREENLAND)

4.12 CARESÈR (ITALY/ALPS)

COORDINATES: 46.45° N / 10.70° E

View of Caresèr Glacier taken on 3 August 2015. Photo by M. Callegari.

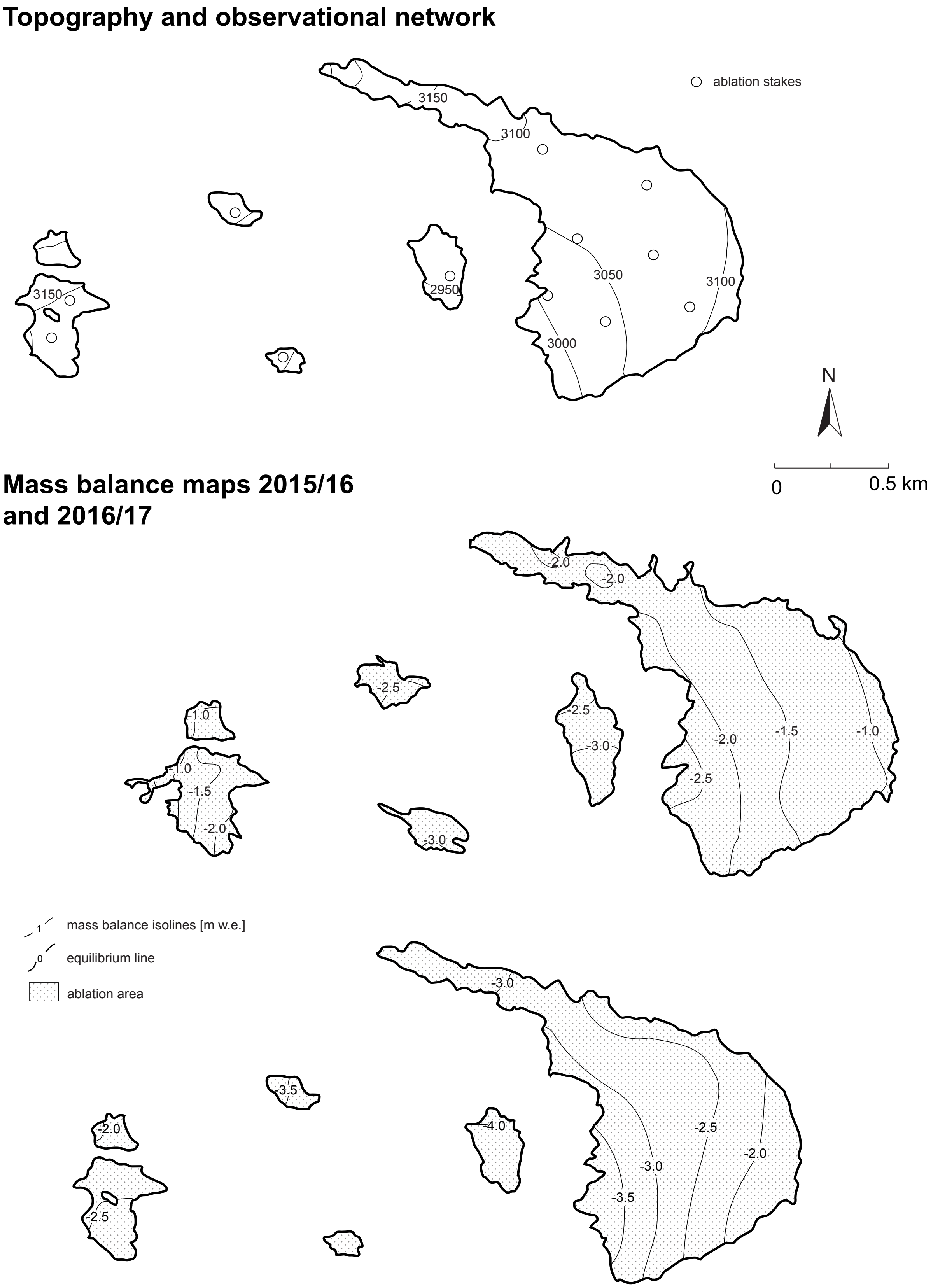
Caresèr Glacier is located in the Ortles-Cevedale group (Eastern European Alps, Italy). It occupies an area of 1.14 km^2 (in 2017) and its elevation ranges from 2,940 to 3,270 m a.s.l. The glacier is exposed mainly to the south and is rather flat. A full 90% of the glacier area lies between 2,950 and 3,150 m a.s.l. and the median altitude is 3,076 m a.s.l. The mean annual air temperature at this elevation is about –3 to –4 °C and precipitation averages 1,450 mm.

Direct mass balance investigations on Caresèr Glacier started in 1967, and until 1980 the mass balance was close to equilibrium. Imbalanced conditions and steadily negative mass balances followed, and in the last three decades the ELA was mostly above the maximum elevation of the glacier. The mean value of the annual mass balance was –1,200 mm w.e. a^{-1} from 1981 to 2001, and decreased to –1,800 mm w.e. a^{-1} from 2002 to 2017. In the last fifteen years, the glacier separated into several ice patches, due to the widespread outcrop of the bedrock. Most residual patches are rapidly melting and disappearing, with the exception of the eastern ice body (maximum thickness of 88 m in 2006), which is expected to be the only one to survive in the future.

In the 2015/16, both the winter and summer balances were close to their mean values of the past 30 years. Consequently, the annual balance was in line with the high mass loss rate recorded in the last decades, with a mean value of –1,748 mm w.e. The ELA was above the maximum elevation of the glacier and the AAR was 0%.

The meteorological conditions were even worse in 2016/17, when scarce winter accumulation was followed by intense summer ablation. The winter and summer balances were 40% and 60% lower than average, respectively. With a value of –2,747 mm w.e., the annual balance was the 2nd lowest since 1967, after 2003 (–3,317 mm w.e.).

Figure 4.12.1 Topography and observation network and mass balance maps of 2015/16 and 2016/17.



Caresèr (ITALY)

Figure 4.12.2 Mass balance versus elevation for 2015/16 and 2016/17.

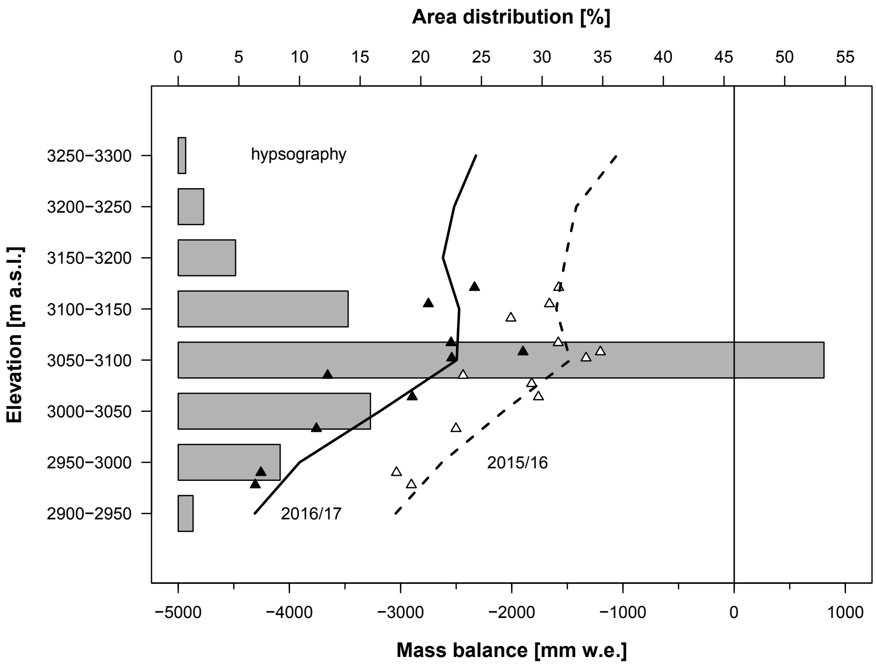


Figure 4.12.3 Glaciological balance versus geodetic balance for the whole observation period.

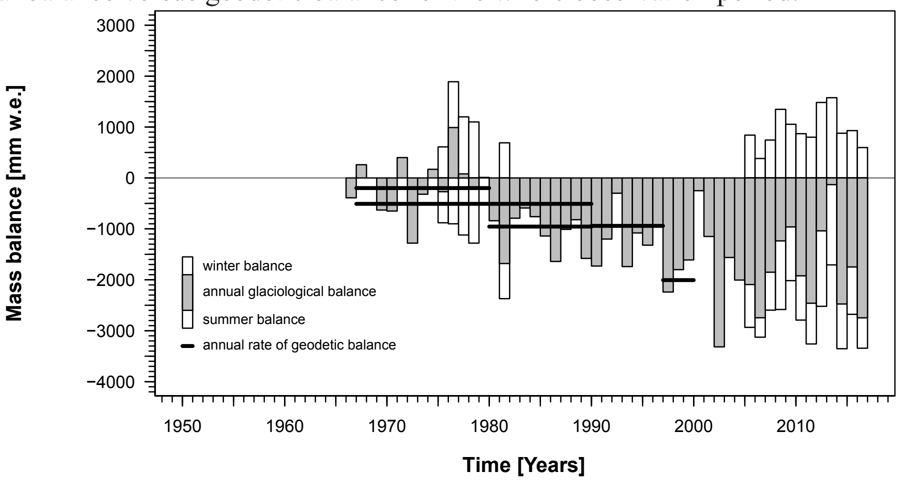
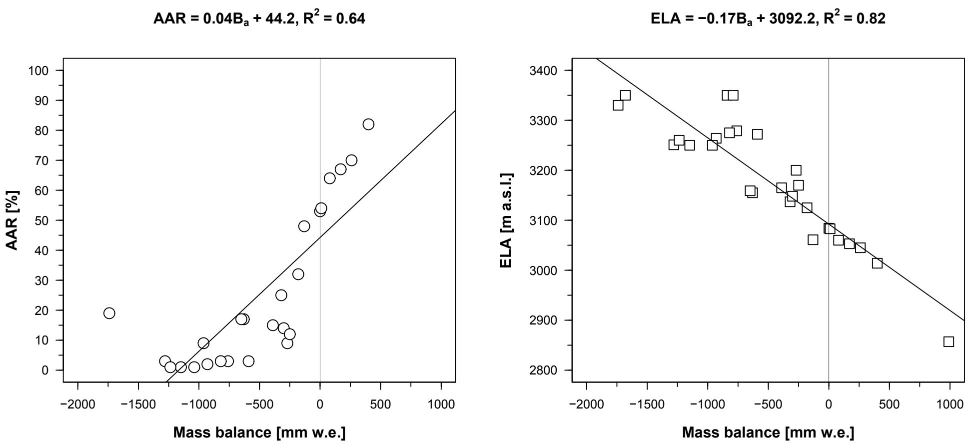


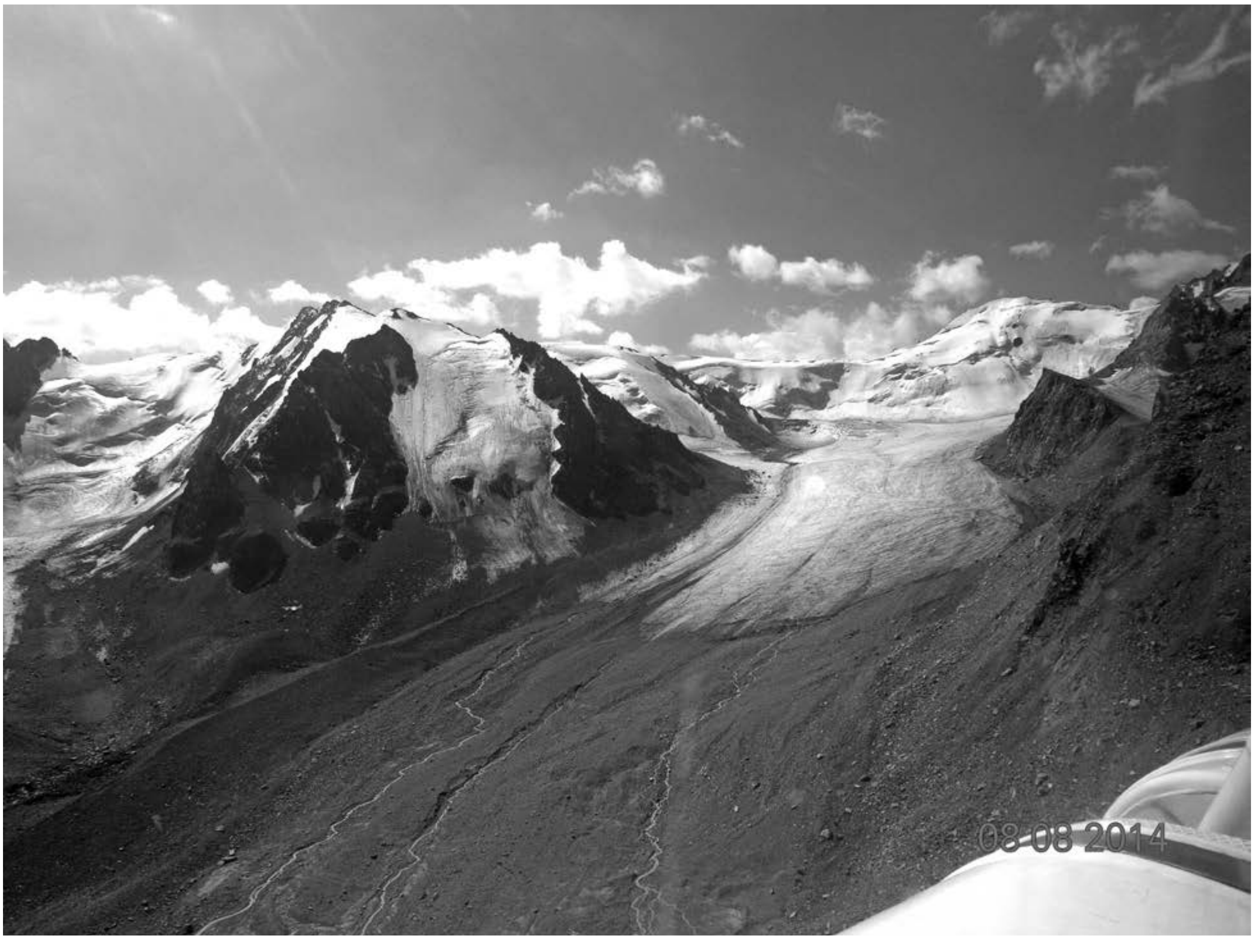
Figure 4.12.4 Accumulation area ratio (AAR) and equilibrium line altitude (ELA) versus specific mass balance for the whole observation period.



Caresèr (ITALY)

4.13 TSENTRALNIY TUYUKSUYSKIY (KAZAKHSTAN/TIEN SHAN)

COORDINATES: 43.05° N / 77.08° E



Tuyuksuyskiy glacier on 8 August 2014 (Photo: N. E. Kassatkin).

The Tuyuksu valley glacier is located on the northern slope of the Zailiyskiy Alatau ridge. The glacier is considered to be cold to polythermal and is surrounded by continuous permafrost. Its debris-free surface area amounted to 2.256 km^2 as of 2017.

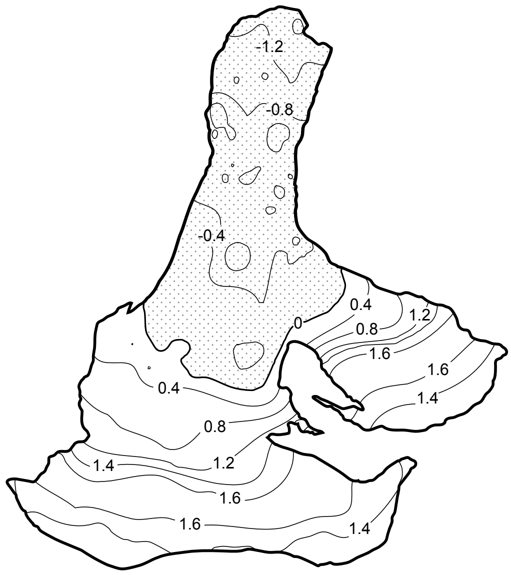
The average annual air temperature at the ELA was –7.4 °C, the annual sum of precipitation at the Tuyuksu meteorological station was equal to 863 mm, 34% of this amount was passed on as precipitation during the summer period. The average air temperature during the warm season (June to September) at the Tuyuksu station amounted to 5.3 ºC, which was 1.0 ºC above the average for 1972–2017, while the annual sum of precipitation for the warm season was 175 mm less than the average for a specified period.

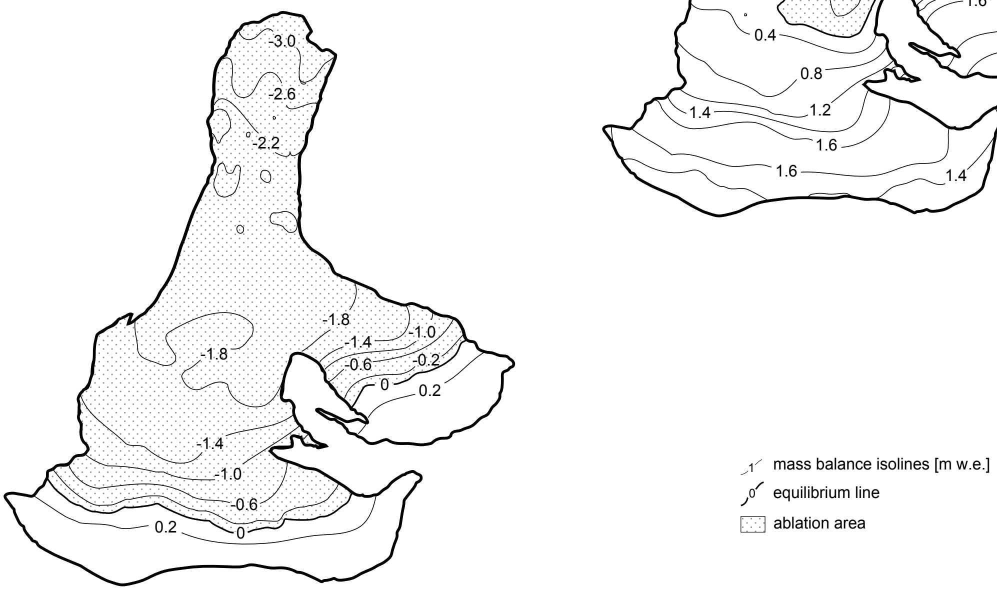
As a result of these conditions, the glacier mass balances for 2015/16 and 2016/17 were 561 and –1,113 mm w.e., respectively. Corresponding ELA (AAR) values were 3,730 m a.s.l. (48%) and 3,950 m a.s.l. (26%). The average annual balance for the 1972–2017 period was –515 mm w.e. a^{-1}.

Figure 4.13.1 Topography and observation network and mass balance maps of 2015/16 and 2016/17.

Topography and observational network

Mass balance maps 2015/16 and 2016/17





Tsentralniy Tuyuksuyskiy (KAZAKHSTAN)

Figure 4.13.2 Mass balance versus elevation for 2015/16 and 2016/17.

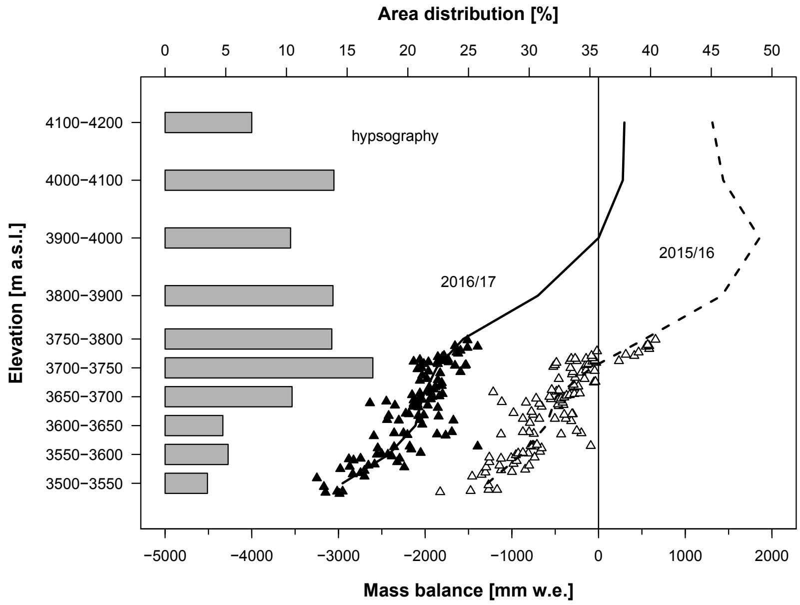


Figure 4.13.3 Glaciological balance versus geodetic balance for the whole observation period.

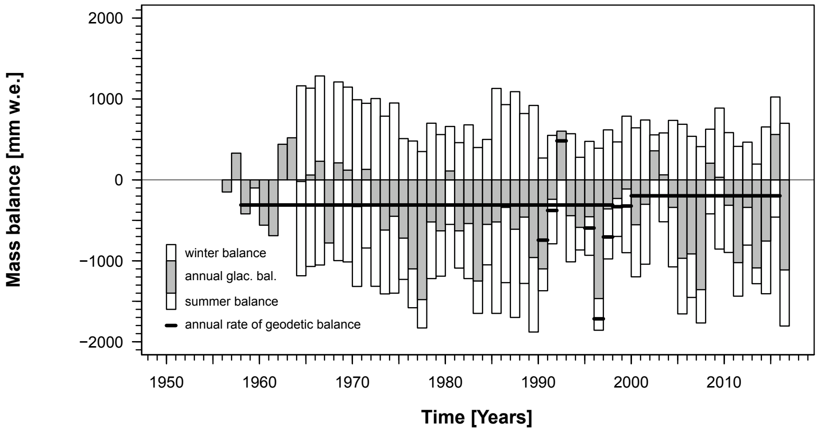
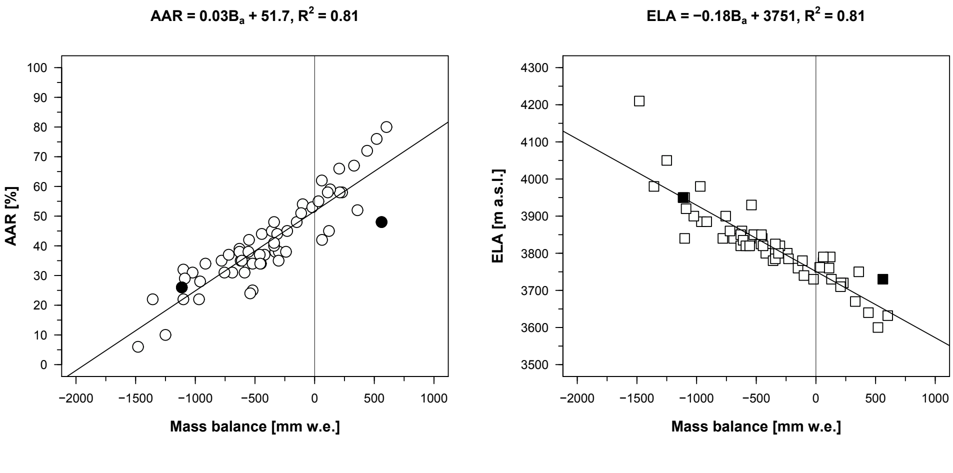


Figure 4.13.4 Accumulation area ratio (AAR) and equilibrium line altitude (ELA) versus specific mass balance for the whole observation period.



Tsentralniy Tuyuksuyskiy (KAZAKHSTAN)

4.14 GOLUBIN (KYRGYZSTAN/TIEN SHAN)

COORDINATES: 42.46° N / 74.50° E

Golubin glacier in 2016 (Photo: A. Ghirlanda).

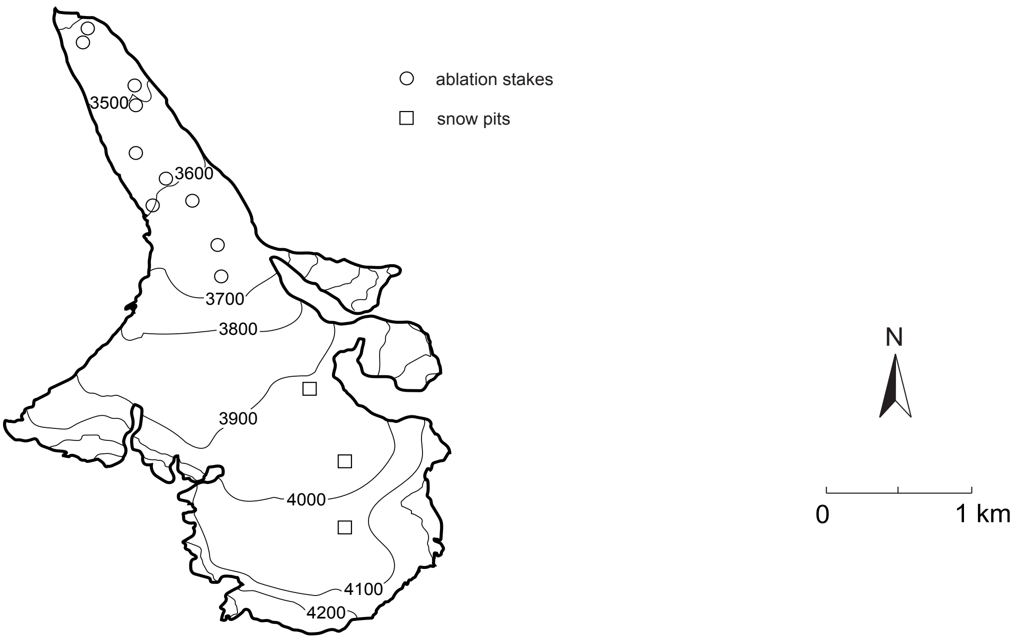
Golubin Glacier is located in the Ala Archa Valley in the Kyrgyz Ala-Too mountains in the northern Tien Shan. Today the glacier covers an area of 5.45 km^2. The continental mountain glacier has a north orientated accumulation area and a north-western aspect in the ablation area. The terminus is currently located at an elevation of about 3,400 m a.s.l. and the glacier extends to an elevation of about 4,300 m a.s.l. Long-term measurements indicate an internal accumulation due to refreezing of meltwater of about 80 mm w.e. a^{-1} (Aizen et al., 1997). For Golubin, the geodetic mass loss reported by Bolch (2015) was –460 ± 240 mm w.e. a^{-1} from 1964 to 2000 and –280 ± 960 mm w.e. a^{-1} from 2000 to 2012, whereas Barandun et al. (2018) found a geodetic mass balance of –300 ± 370 mm w.e. a^{-1} for the period 2006 to 2014. Model reconstruction indicate that Golubin lost –170 ± 450 mm w.e. a^{-1} from 1901 to 2016. Mass loss increased in the second half of the century with an average mass balance of –210 ± 420 mm w.e. a^{-1} from 1950 to 2018. Direct measurements for the past decade confirm this tendency with a mass loss of –280 ± 170 m w.e. a^{-1} (2011–2018). The glacier has retreated 1,294 m since 1861. Secular glacier mass balance was derived from cumulative length changes according to a parametrization scheme developed by Hoelzle et al. (2003) and estimated to –170 mm w.e. a^{-1} for the period from 1861 to 2016. The climate shows low amounts of precipitation with a peak in spring. The mean annual precipitation sum from 1992 to 2010 was 550 mm measured at the Alplager station in the Ala Archa valley at 2,145 m a.s.l. The temperature amplitudes are high with low winter and high summer temperatures with a mean annual air temperature of 3 °C at the Alplager station considering the period from 1992 to 2010.

Glaciological investigations began in 1958 and mass balance was reported seasonally from 1969 to 1994. Measurements have been re-initiated in 2010 and the glacier has since been continuously monitored through joint efforts of the Central Asian Institute of Applied Geosciences (CAIAG), Kyrgyz Hydromet, the Geoforschungszentrum Potsdam (GFZ) and the University of Fribourg as part of the Central Asian Water (CAWa), the Capacity Building and Twinning of Climate Observation Systems (CATCOS) and the Cryospheric Climate Services for improved Adaptation (CICADA) projects.

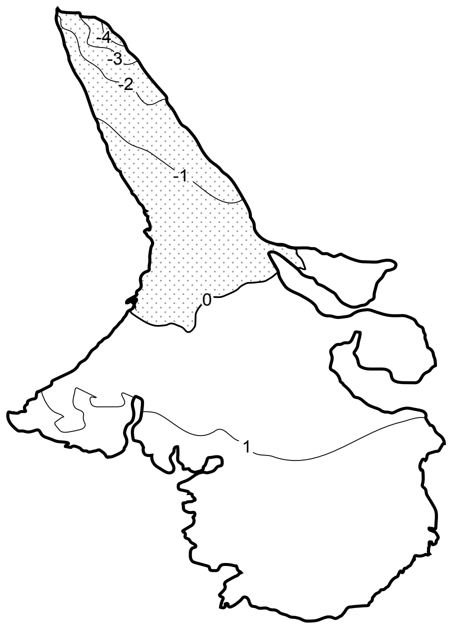
Mass balances for 2015/16 and 2016/17 were 130 and –144 mm w.e., respectively. Corresponding ELA values were 3,745 and 3,775 m a.s.l., respectively, with an AAR of 72% in both years.

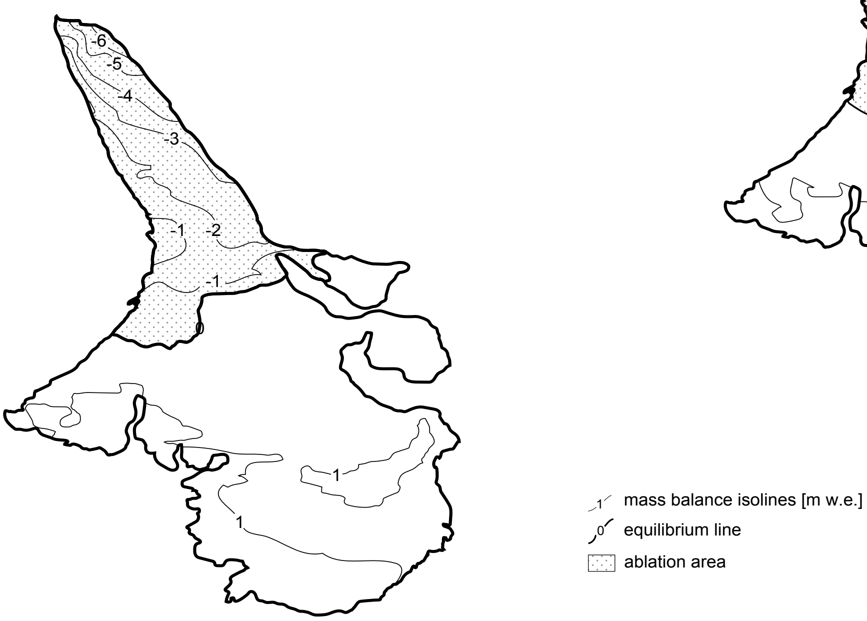
Figure 4.14.1 Topography and observation network and mass balance maps of 2015/16 and 2016/17.

Topography and observational network



Mass balance maps 2015/16 and 2016/17





Golubin (KYRGYZSTAN)

Figure 4.14.2 Mass balance versus elevation for 2015/16 and 2016/17.

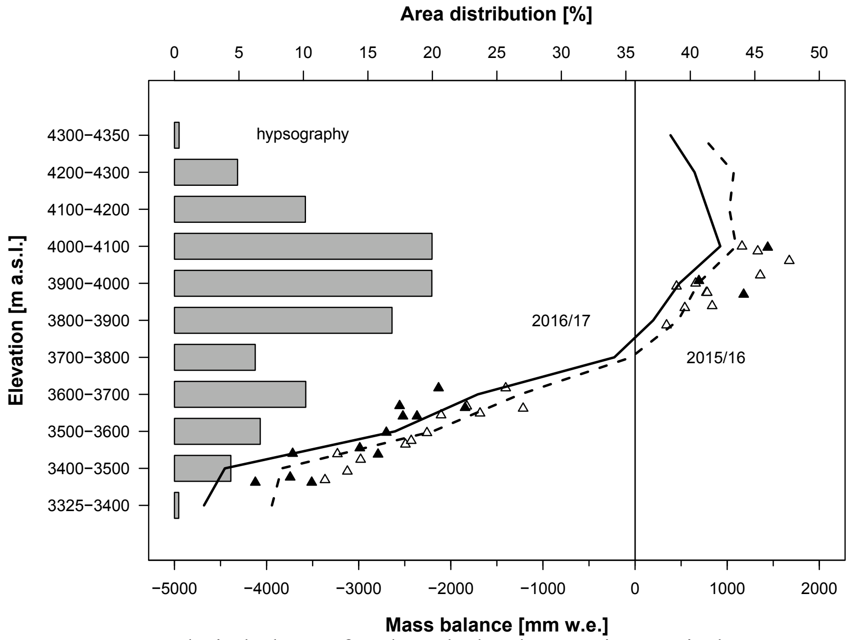


Figure 4.14.3 Glaciological balance versus geodetic balance for the whole observation period.

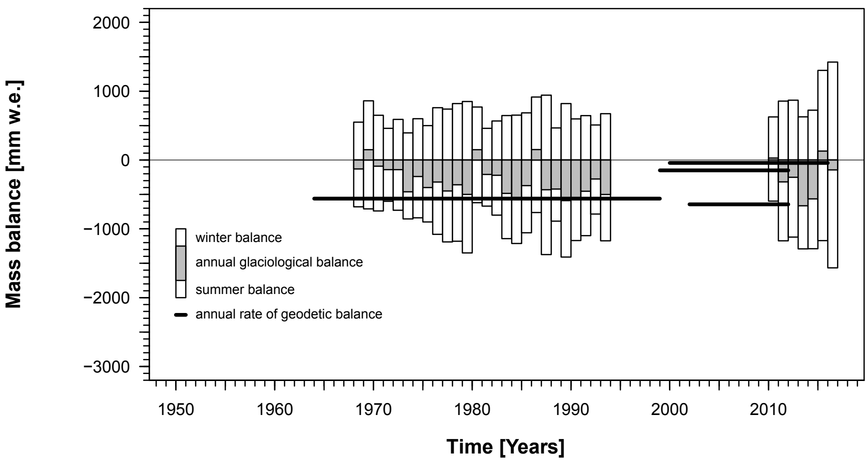
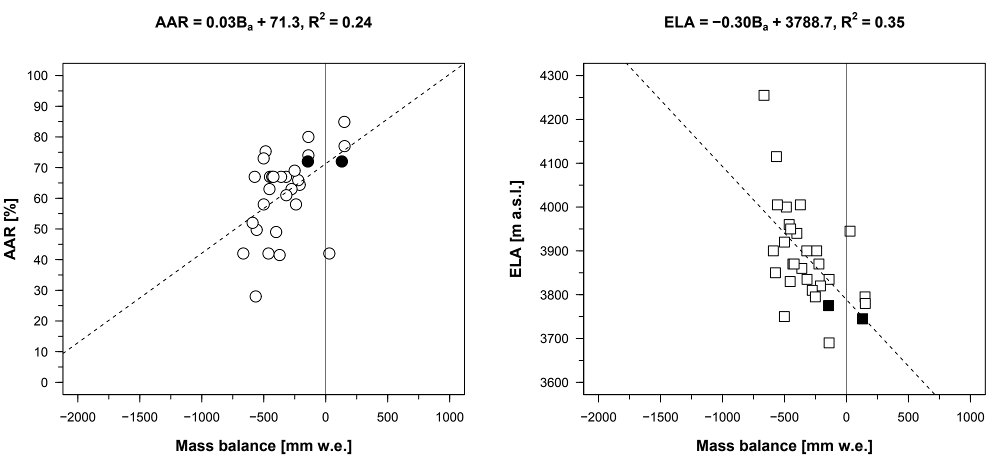


Figure 4.14.4 Accumulation area ratio (AAR) and equilibrium line altitude (ELA) versus specific mass balance for the whole observation period.



Golubin (KYRGYZSTAN)

4.15 YALA (NEPAL/HIMALAYA)

COORDINATES: 28.24° N / 85.62° E

Photograph of Yala glacier taken by S.P. Joshi on 30 November 2018.

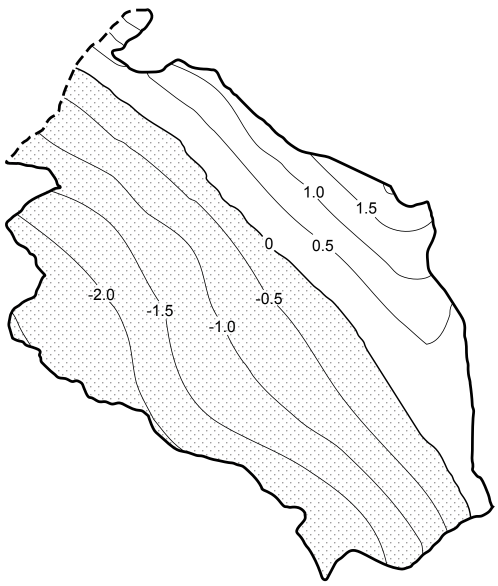
Yala Glacier is located in the Langtang Valley, Rasuwa district of Nepal 70 km north of Kathmandu. It is a plateau type glacier with an altitude range from 5,661 to 5,168 m a.s.l. In 2012, the length and area of Yala Glacier were about 1.2 km and 1.61 km^2, respectively. The glacier is mainly oriented southwest, and has many ice cliffs facing south and southwest. The nearest weather station with long-term data is in Kyangjing (3,920 m a.s.l.), which is about 6 km horizontal distance and southwest of the Yala Glacier. The mean annual air temperature in Kyangjing is about 4 °C and the annual average precipitation is about 661 mm (1988–2012). The main precipitation originates from monsoon systems during the summer months, and the rest from westerly disturbances mainly in the second part of winter and spring.

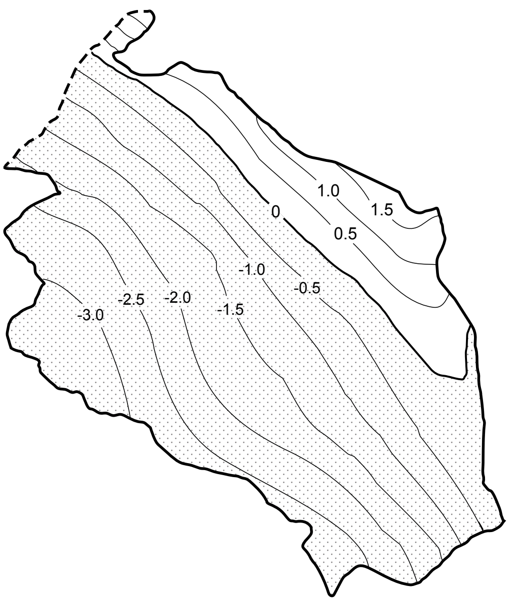
Yala Glacier has been investigated since the 1980s by Japanese researchers. The mass-balance monitoring programme was re-established in 2011 by the Cryosphere Monitoring Programme of ICIMOD and partner organizations, and has been funded by the Government of Norway. The observations show that the glacier has been shrinking continuously, having retreated 354 m since 1974, with an annual average retreat rate of 8 m a^{-1}. From 2014 to 2016, Yala Glacier retreated 15 m. The mass balances in 2015/16 and 2016/17 were –609 mm w.e. and –1,183 mm w.e., respectively, and the corresponding ELAs were 5,444 m and 5,486 m a.s.l., with an AAR of 31% and 19%. The glacier-wide mass balance was extrapolated based on the mass balance gradient as derived from the field measurements.

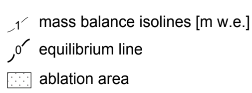
Figure 4.15.1 Topography and observation network and mass balance maps of 2015/16 and 2016/17.

Topography and observational network

Mass balance maps 2015/16 and 2016/17







Yala (NEPAL)

Figure 4.15.2 Mass balance versus elevation for 2015/16 and 2016/17.

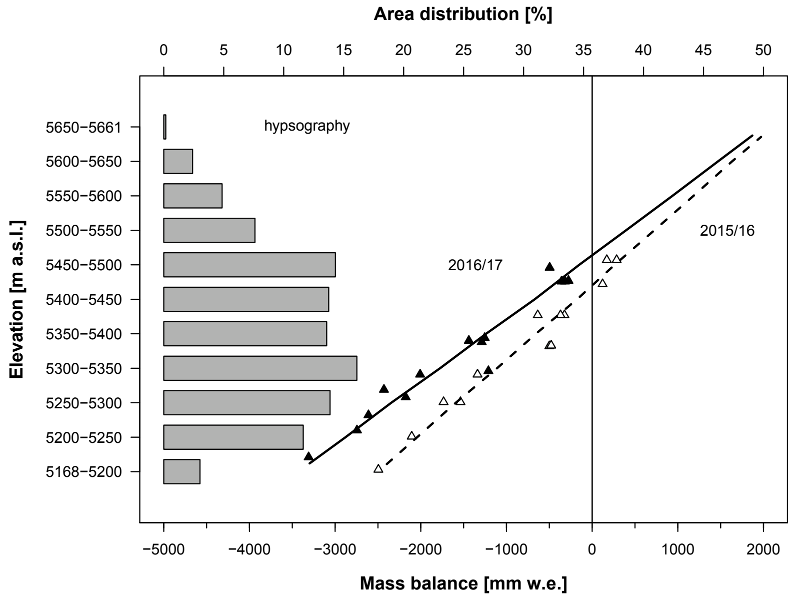


Figure 4.15.3 Glaciological balance versus geodetic balance for the whole observation period.

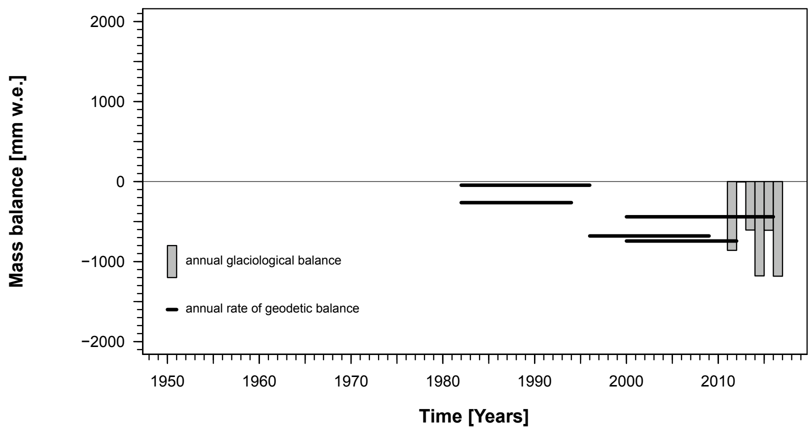
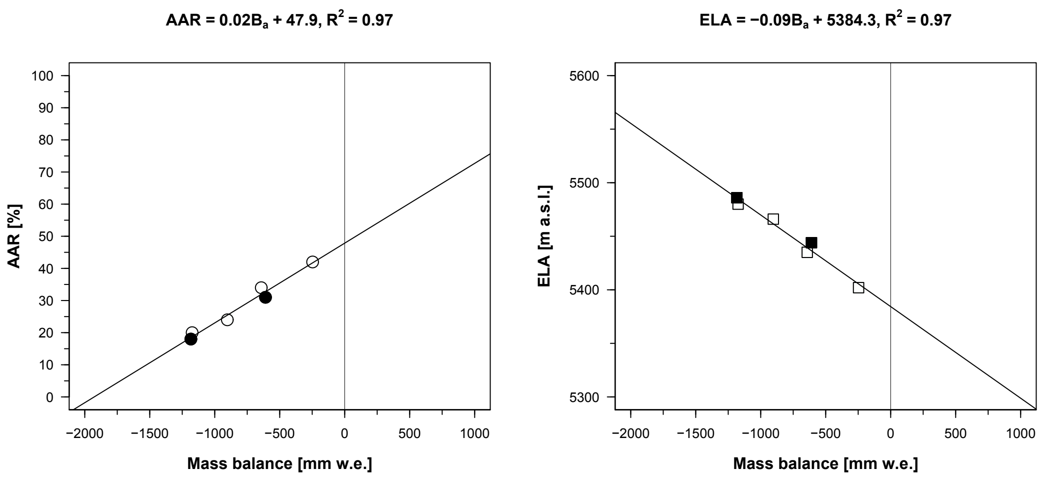


Figure 4.15.4 Accumulation area ratio (AAR) and equilibrium line altitude (ELA) versus specific mass balance for the whole observation period.



Yala (NEPAL)

4.16 KONGSVEGEN (NORWAY/SPITSBERGEN)

COORDINATES: 78.80° N / 12.98° E

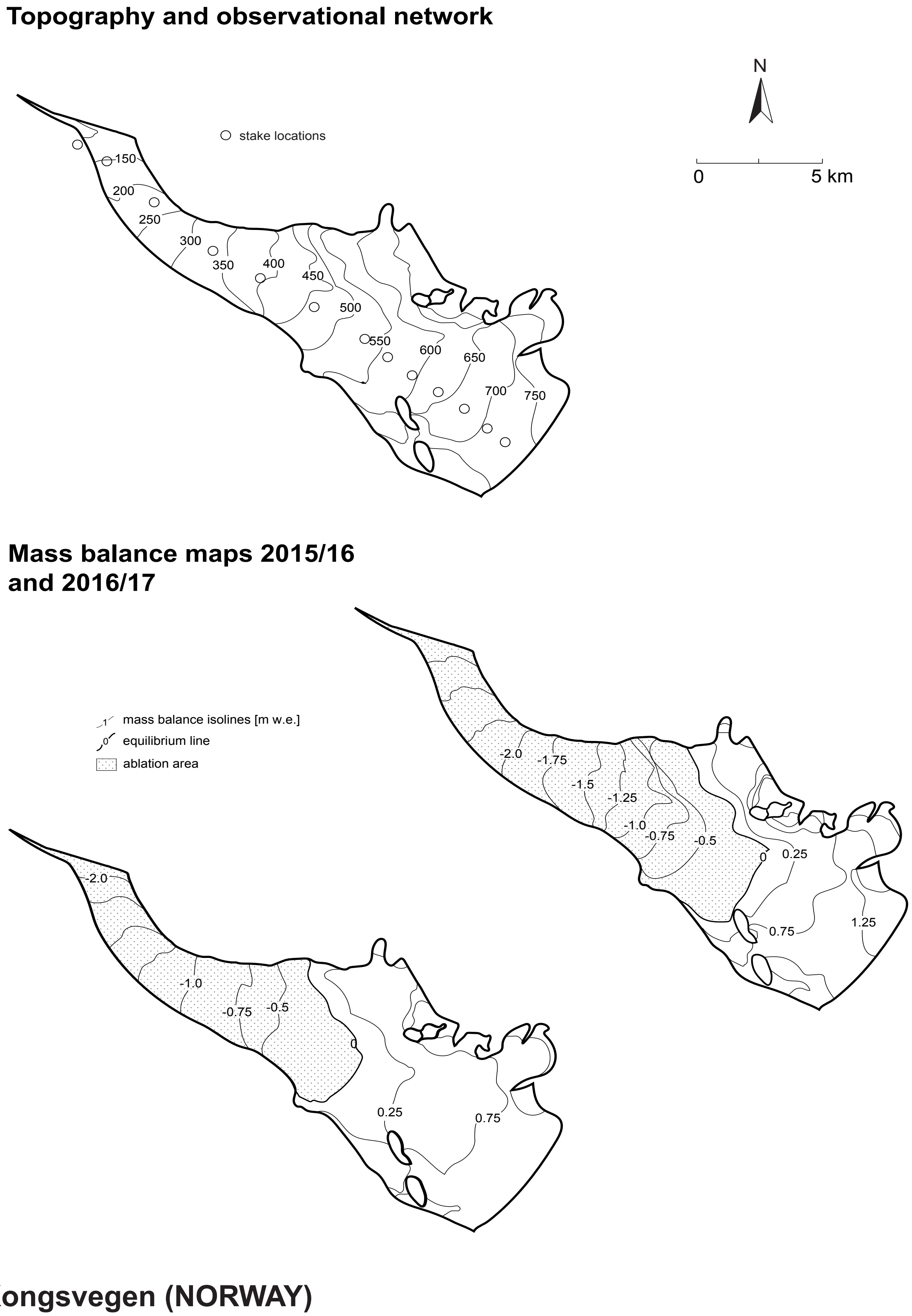
Photograph from Kongsvegen by H.T. Markussen (taken on 21 September 2017).

Kongsvegen is a 25 km long tidewater glacier, with an area of ~100 km^2, extending from sea level to 850 m a.s.l. Mean ice thickness is 175 m, with a maximum of 445 m. The glacier front terminates in Kongsfjord but is relatively narrow, squeezed between its fast-flowing neighboring tidewater glacier Kronebreen and the valley side. Kongsvegen is a surge-type glacier; the last surge occurred around 1948, but recent data suggests a new surge is imminent, with speeds increasing in the upper glacier since about 2014. Speeds are still very low at the front, less than 1 m a^{-1}, so while there is nominally a calving front, there is practically no ice flux, and loss is mainly from retreat of the narrow front (ca. 200 m wide). Frontal retreat has been about 150 m a^{-1} since 2010, equivalent to an additional loss to the surface mass balance of ~20 mm w.e. a^{-1}. Mean annual air temperature, as measured at AWS at the ELA, is –8.5 °C for the period 2000–2017. Precipitation is not measured on the glacier, but the long-term average winter balance is 680 mm w.e. a^{-1}, and the mean annual precipitation at the nearest meteorological station in Ny-Ålesund is 420 mm.

Centerline stakes are measured in spring and autumn to derive winter and summer point mass balances, winter snow depth is measured on a 500 m grid covering main glacier areas, winter superimposed ice accumulation is estimated from cores taken at the lower elevation stakes, and density is measured in one to five snow pits at different locations on the centerline. The centerline point measurements are weighted by the hypsometry. A comparison with the most recent geodetic surveys (Nuth et al. 2012) from 1966, 1995, and 2007 suggests that the centerline mass balance estimates may not be representative for the whole glacier, with centerline accumulation greater than the elevation bin average.

The mass balances were –320 and 40 mm w.e. in 2015/16 and 2016/17, respectively. Corresponding ELA (AAR) values were 591 m a.s.l. (30%) and 525 m a.s.l. (47%), respectively.

Figure 4.16.1 Topography and observation network and mass balance maps of 2015/16 and 2016/17.



Kongsvegen (NORWAY)

Figure 4.16.2 Mass balance versus elevation for 2015/16 and 2016/17.

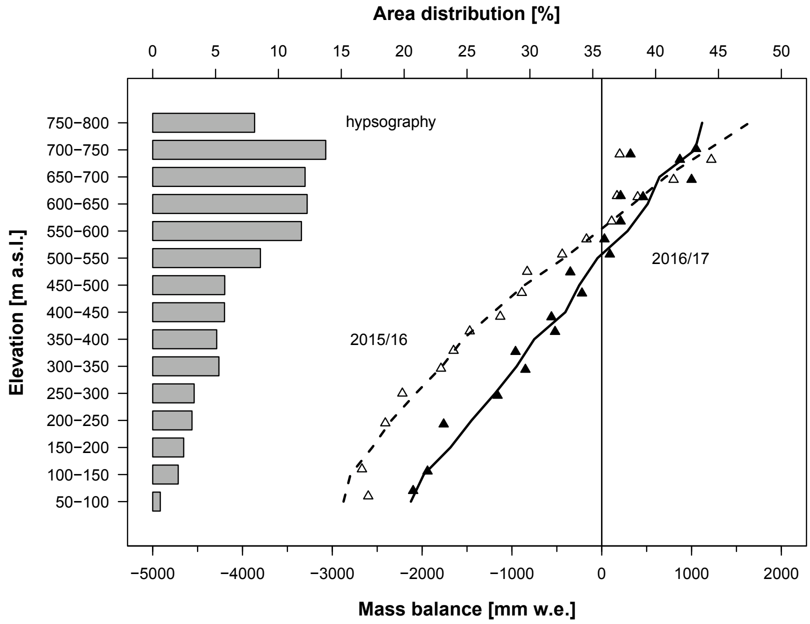


Figure 4.16.3 Glaciological balance versus geodetic balance for the whole observation period.

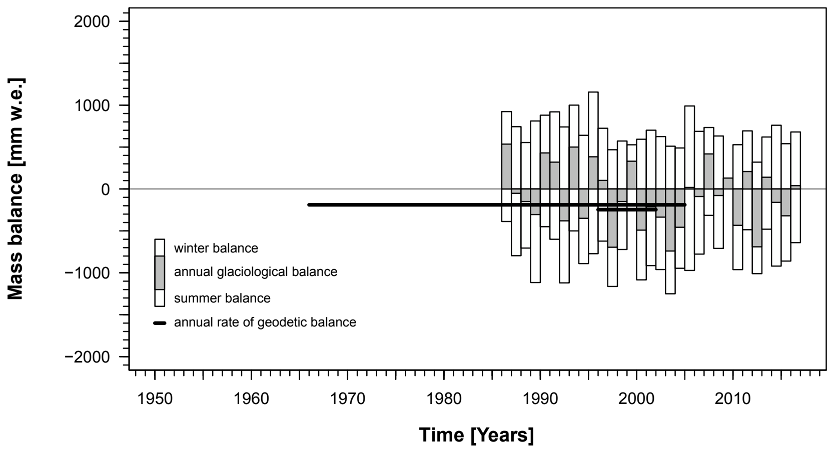
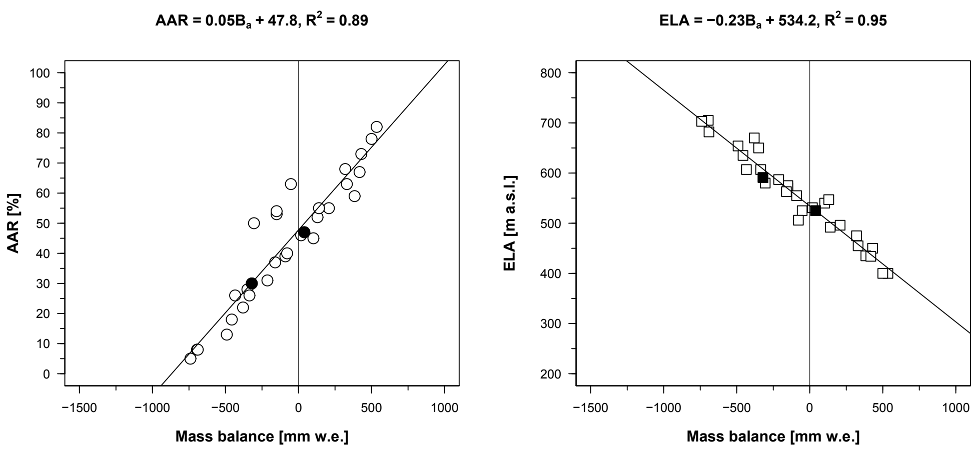


Figure 4.16.4 Accumulation area ratio (AAR) and equilibrium line altitude (ELA) versus specific mass balance for the whole observation period.



Kongsvegen (NORWAY)

4.17 WALDEMARBREEN (NORWAY/SPITSBERGEN)

COORDINATES: 78.67° N / 12.00° E

Photograph from summer 2017, taken by I. Sobota.

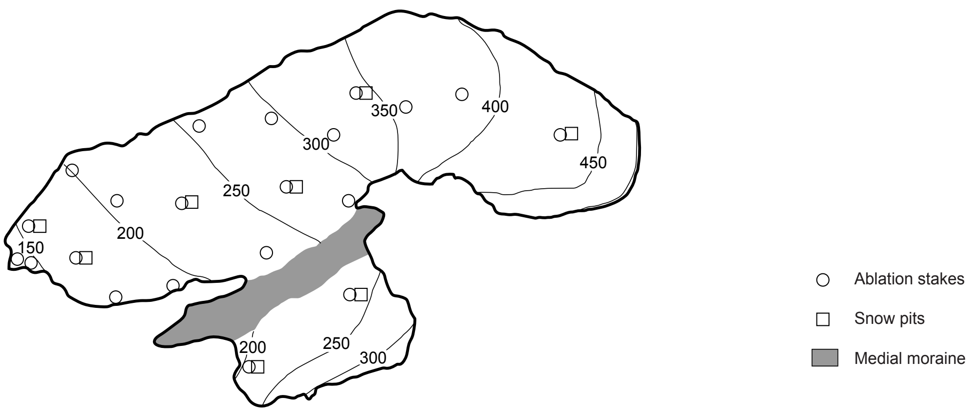
Waldemarbreen is located in the northern part of the Oscar II Land, north-western Spitsbergen, and flows down valley to the Kaffiøyra plain. Kaffiøyra is a coastal lowland situated on the Forlandsundet. The glacier is composed of two parts separated by a 1,600 m long medial moraine. It occupies an area of about 2.4 km^2 and extends from 500 m to 150 m a.s.l. with a general exposure to the west. Mean annual air temperature in this area is about –4 to –5 °C and annual precipitation is generally 300–400 mm. In the years 1997 to 2017 the average air temperature during the summer season in this region was 5.4 °C. Since the 19th century, the surface area of the Kaffiøyra region glaciers has decreased by more than 44%. Recently Waldemarbreen has been in retreat.

Mass balance investigations have been conducted since 1996. Detailed glaciological research methods and geodetic surveys are described by Sobota et al. (2016) and Sobota (2013, 2017).

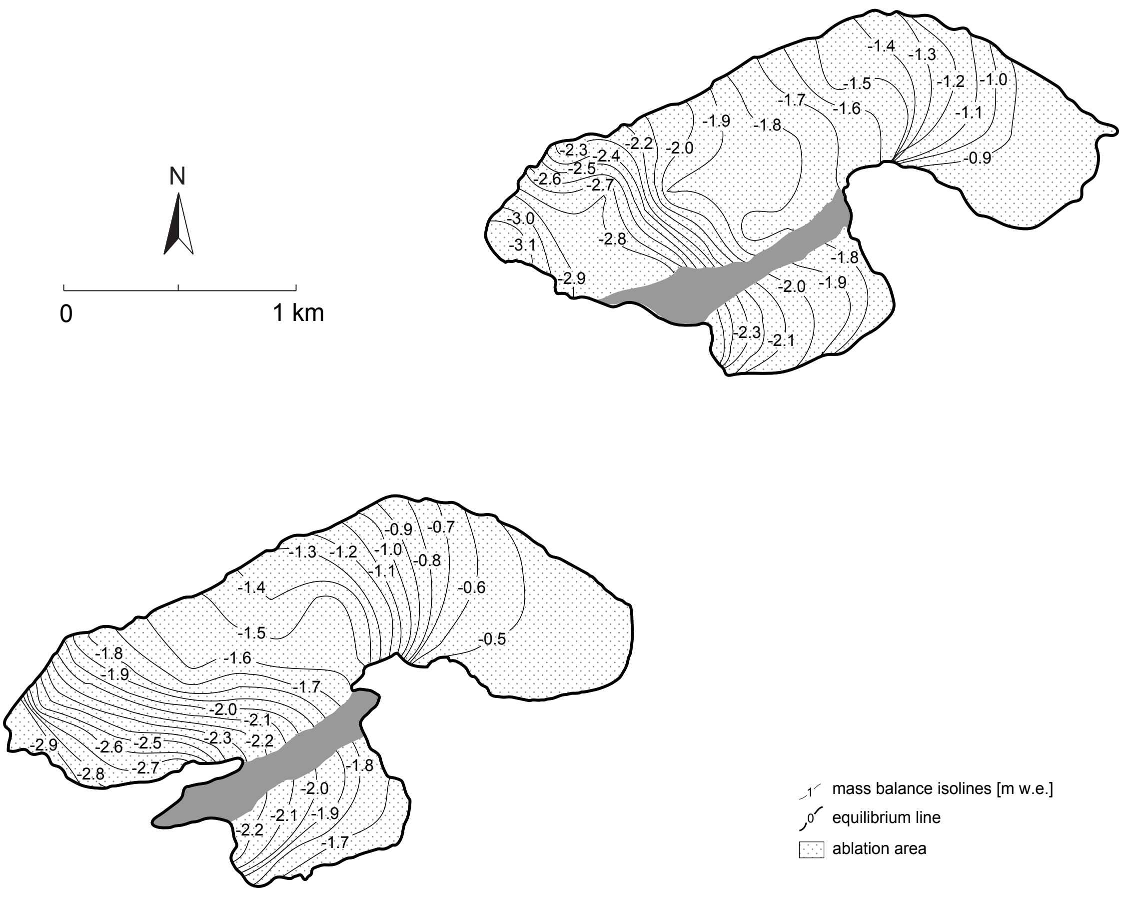
The balance in 2015/16 showed a mass loss of –1,773 mm w.e. The corresponding ELA was 583 m a.s.l., with an AAR of 0%. In 2016/17 the mass balance was –1,425 mm w.e. The ELA was 489 m a.s.l., with an AAR of 1%. The mean value of the mass balance for the period 1996 to 2017 was –798 mm w.e. a^{-1}.

Figure 4.17.1 Topography and observation network and mass balance maps of 2015/16 and 2016/17.

Topography and observational network



Mass balance maps 2015/16 and 2016/17



Waldemarbreen (NORWAY)

Figure 4.17.2 Mass balance versus elevation for 2015/16 and 2016/17.

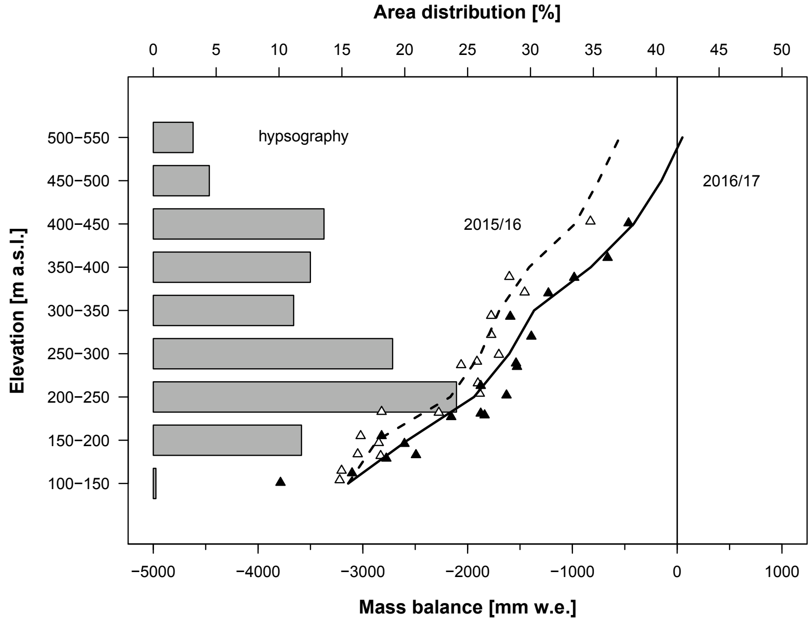


Figure 4.17.3 Glaciological balance versus geodetic balance for the whole observation period.

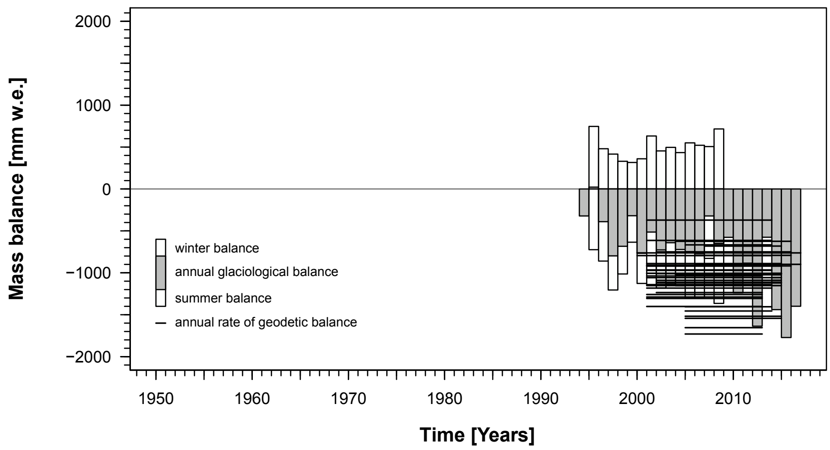
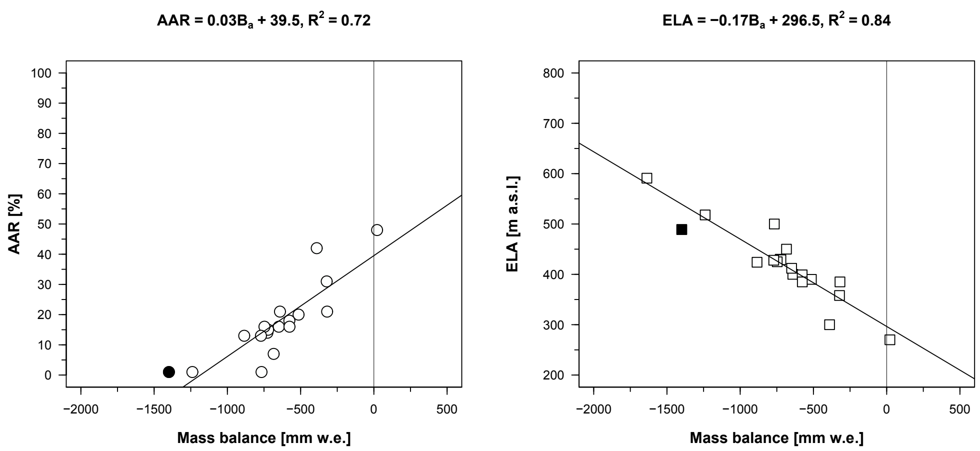


Figure 4.17.4 Accumulation area ratio (AAR) and equilibrium line altitude (ELA) versus specific mass balance for the whole observation period.



Waldemarbreen (NORWAY)

4.18 STORGLACIÄREN (SWEDEN/SCANDINAVIA)

COORDINATES: 67.90° N / 18.57° E

Storglaciären in summer 2016 (photograph taken by P. Holmlund).

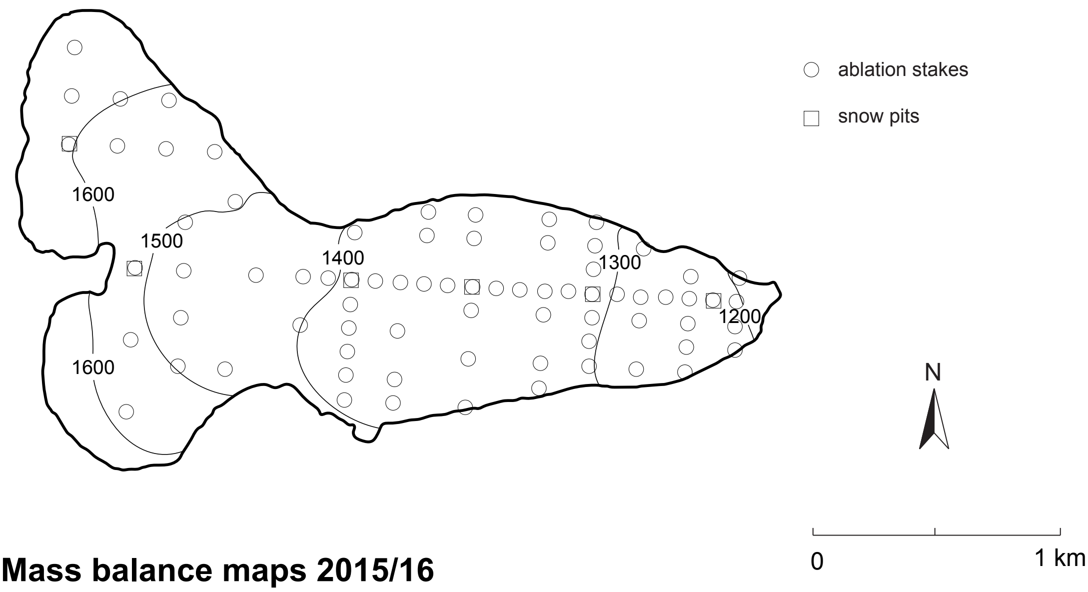
Storglaciären is a small polythermal valley glacier located in the Kebnekaise mountains, Arctic Sweden. The glacier stretches from west to east, from approx. 1,720 m a.s.l. down to 1,150 m a.s.l. It consists of a relatively flat (2° to 15°) ablation area and two steeper cirques (2° to 80°) that make up the accumulation area. It is slightly over 3 km in length and has an area of 2.9 km^2. The average thickness is estimated to be near 100 m with a maximum thickness of over 200 m at overdeepenings. The climate in the region is continental with a prevailing westerly wind. The temperature peaks in July and is at its lowest in January. Since 2013 an AWS has been situated at approx. 1,350 m a.s.l. in the upper part of the ablation area of the glacier. From mid-May to mid-September it is equipped to measure the surface energy balance and the rest of the year it measures temperature and change in surface height. At the AWS the mean annual temperature is −3.2 °C and the annual precipitation is around 1,500 mm, whereby two-thirds of the precipitation falls as snow. Lengthy climate records exist from Tarfala research station (1,130 m a.s.l.) situated about one kilometer from the glacier. The latest geodetic information is from 2015 when the Swedish national land survey agency Lantmäteriet laser scanned the Kebnekaise area resulting in a DEM with about 2 m horizontal resolution.

The mass balance series of Storglaciären started with the mass balance year 1945/46. Since then the change in cumulative mass has been −18 m w.e. Today, the mass balance is measured by means of an extensive network of around 300 snow depth probe points, 75 ablation stakes and 6 density pits and is calculated using universal kriging with a Gaussian model.

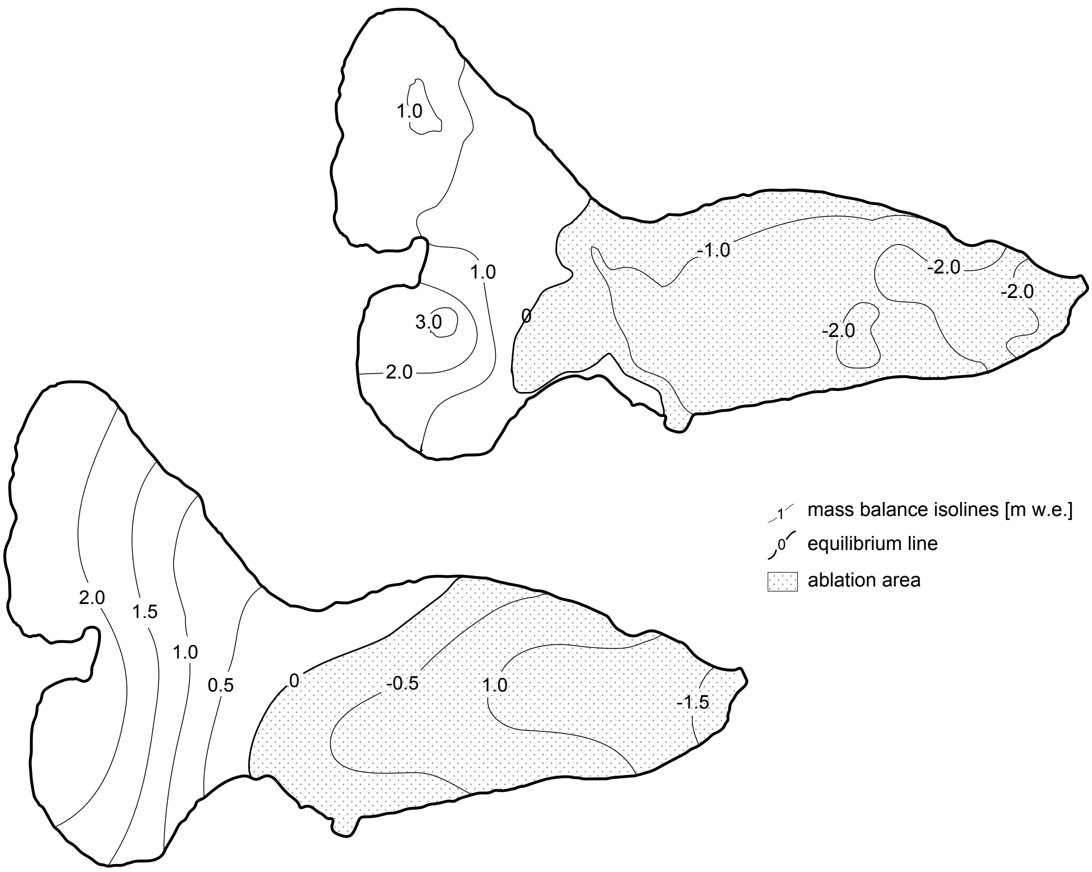
The mass balance year 2015/16 was a slightly negative year with a mass balance of −240 mm w.e. The ablation season had 142 positive degree days (574 °C) starting in late May and ending in mid October. The mass balance year 2016/17 had a relatively short and cool summer (118 positive degree days, 488 °C) resulting in a positive mass balance of 470 mm w.e.

Figure 4.18.1 Topography and observation network and mass balance maps of 2015/16 and 2016/17.

Topography and observational network



Mass balance maps 2015/16 and 2016/17



Storglaciären (SWEDEN)

Figure 4.18.2 Mass balance versus elevation for 2015/16 and 2016/17.

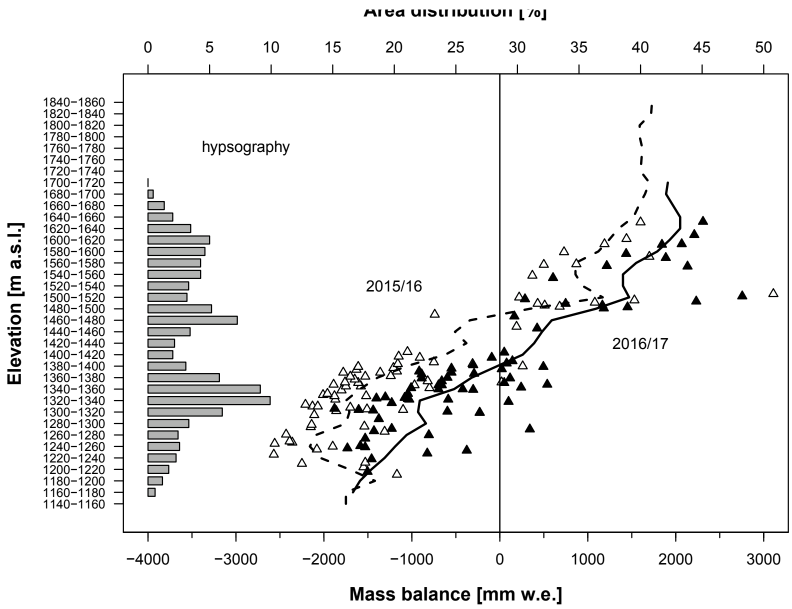


Figure 4.18.3 Glaciological balance versus geodetic balance for the whole observation period.

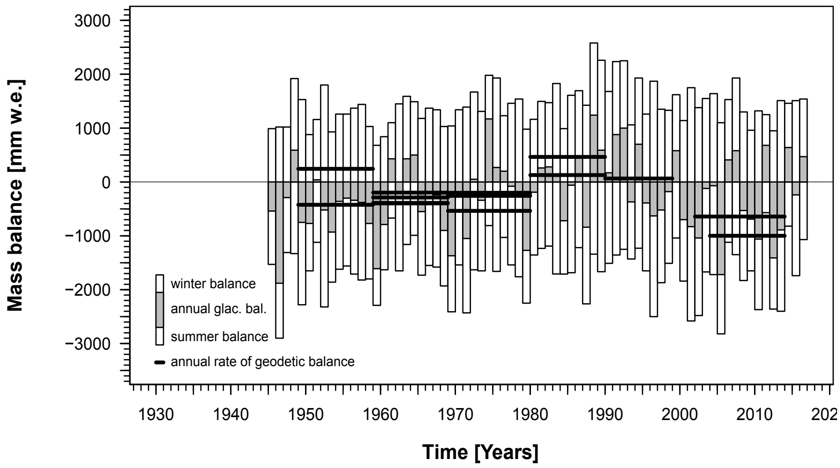
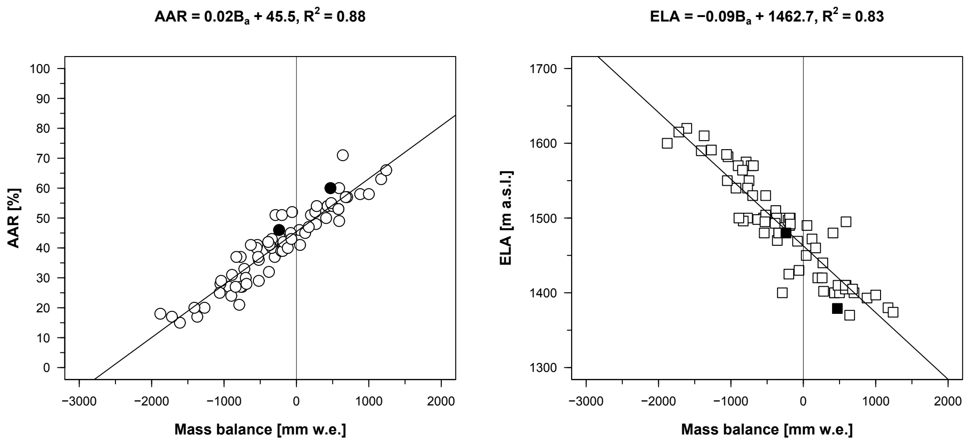


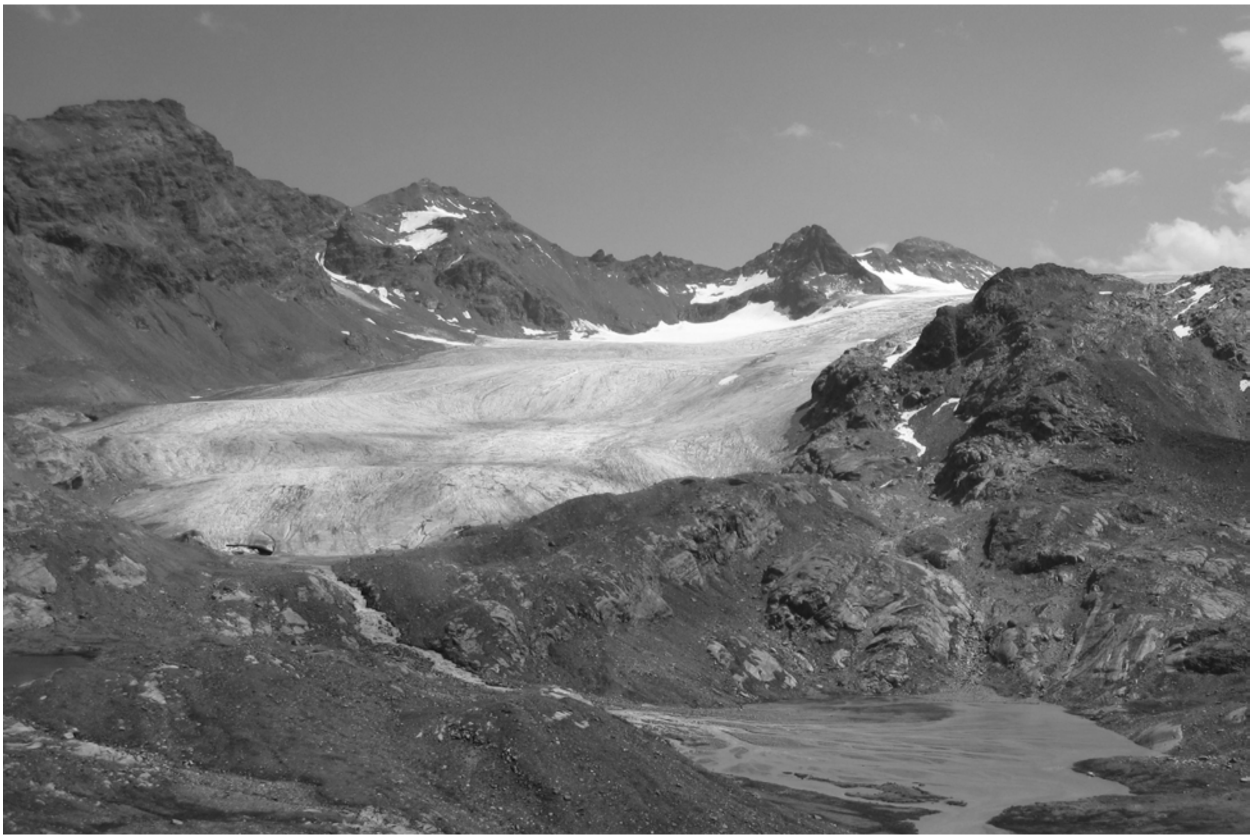
Figure 4.18.4 Accumulation area ratio (AAR) and equilibrium line altitude (ELA) versus specific mass balance for the whole observation period.



Storglaciären (SWEDEN)

4.19 SILVRETTAGLETSCHER (SWITZERLAND/ALPS)

COORDINATES: 46.85° N / 10.08° E



Silvrettagletscher and its proglacial area in August 2017 (A. Bauder).

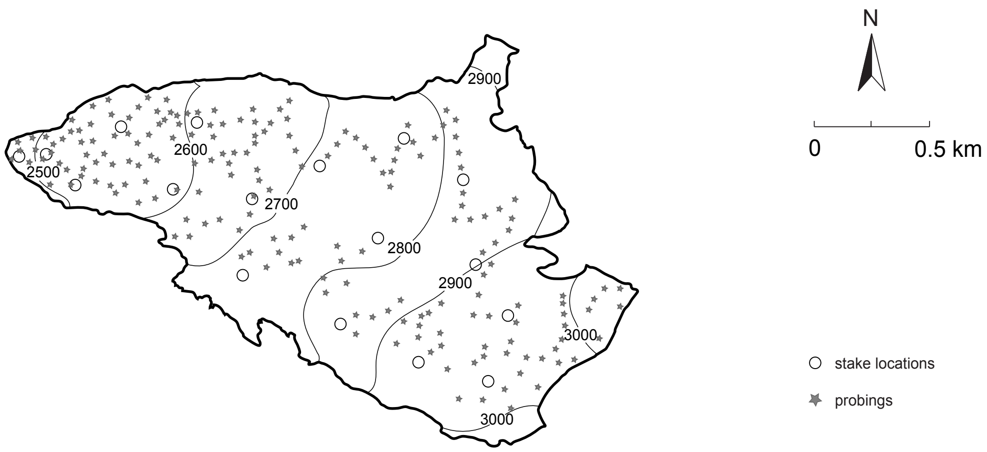
Silvrettagletscher is a small temperate mountain glacier located in the north-eastern part of Switzerland in the Silvretta massif at the border to Austria. The glacier is characterized by relatively small surface slopes and is exposed to the west. The glacier has a length of 2.8 km and is almost free of supraglacial debris. The present surface area is 2.7 km^2, extending from 3,090 m a.s.l. down to 2,470 m a.s.l. A campaign to measure ice thickness was conducted in 2007, indicating maximum ice thicknesses of somewhat more than 100 m. Updated to 2017, the overall ice volume is 0.14 km^3, corresponding to an average ice thickness of 53 m (Farinotti et al., 2009). The average annual and summer air temperature (1981–2010) at the equilibrium line is around –3 °C and +4 °C, respectively, and mean annual precipitation at the Klosters valley station (13 km from the glacier terminus) is 1,410 mm.

The first mass balance measurements on Silvrettagletscher date back to 1916 with continuous seasonal observations until 1959 at two stakes (Huss and Bauder, 2009). Subsequently, the network was increased to about 40 stakes and then was reduced by the mid-1980s. Today measurements at 18 stakes are maintained. Detailed surveys of the seasonal mass balance distribution are available for the period since 2003. The evolution of surface topography is documented by more than ten digital elevation models at decadal intervals and volumetric changes were determined over the period from 1892 to 2017 (Bauder et al., 2007).

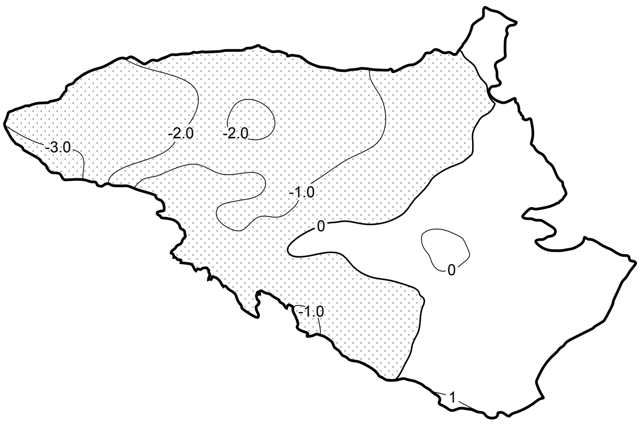
The glacier-wide annual surface mass balance 2015/16 was –606 mm w.e. with an ELA at 2,870 m a.s.l. and an AAR of 34%. Due to intensive melt conditions in summer 2017, strong mass loss was observed in 2016/17 with a mass balance of –1,513 mm w.e.. The ELA was on 3,030 m a.s.l. and AAR was 1%.

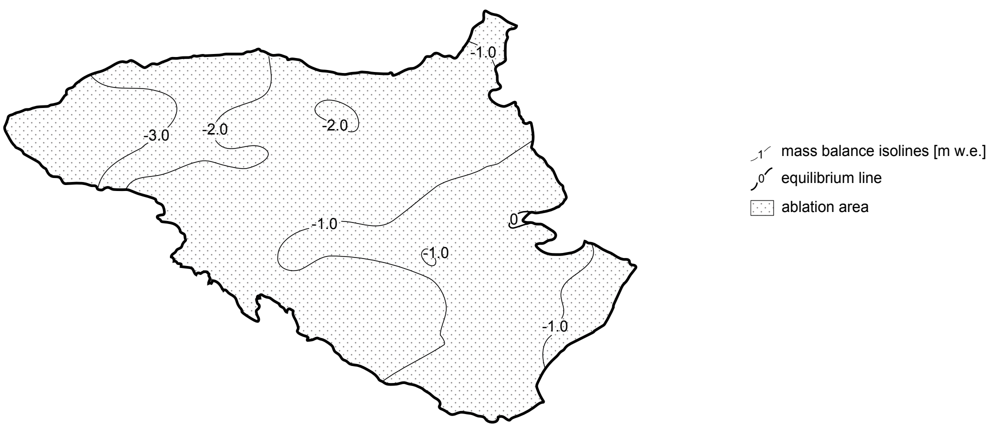
Figure 4.19.1 Topography and observation network and mass balance maps of 2015/16 and 2016/17.

Topography and observational network



Mass balance maps 2015/16 and 2016/17





Silvrettagletscher (SWITZERLAND)

Figure 4.19.2 Mass balance versus elevation for 2015/16 and 2016/17.

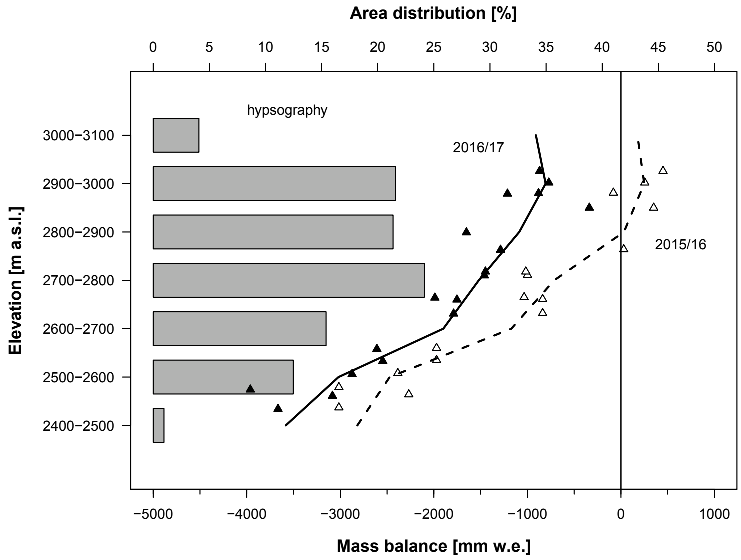


Figure 4.19.3 Glaciological balance versus geodetic balance for the whole observation period.

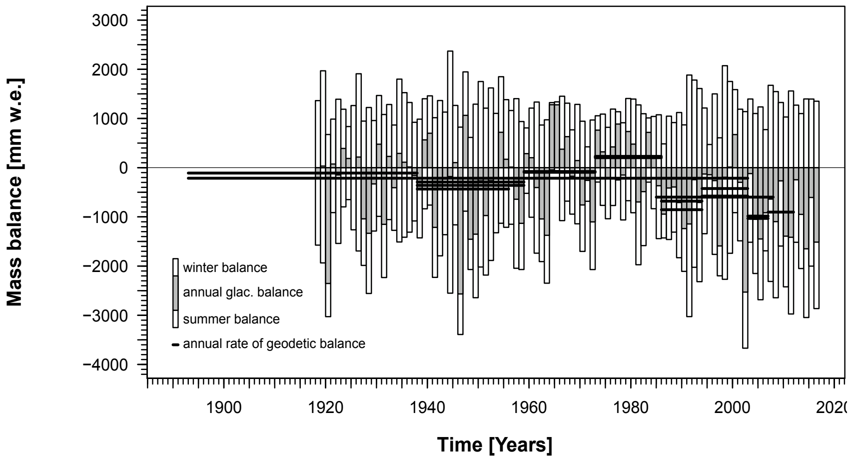
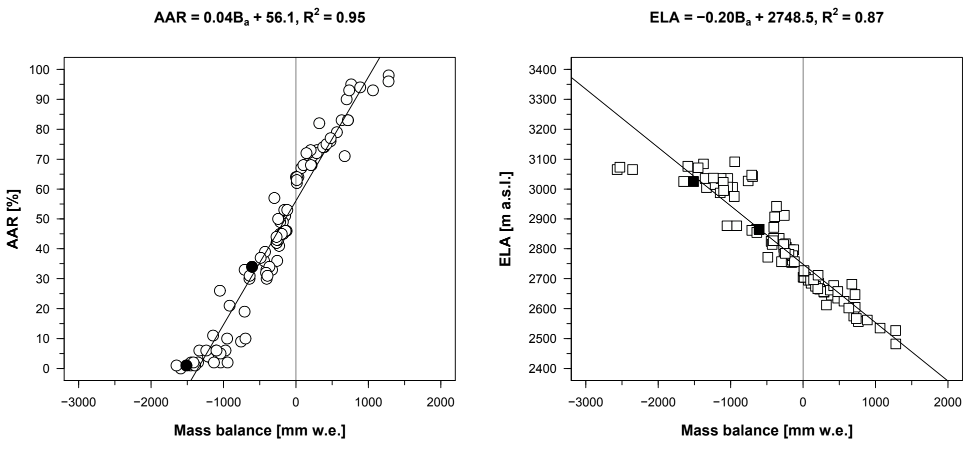


Figure 4.19.4 Accumulation area ratio (AAR) and equilibrium line altitude (ELA) versus specific mass balance for the whole observation period.



Silvrettagletscher (SWITZERLAND)

4.20 COLUMBIA GLACIER (USA/COAST MOUNTAINS)

COORDINATES: 47.97° N / 121.69° W

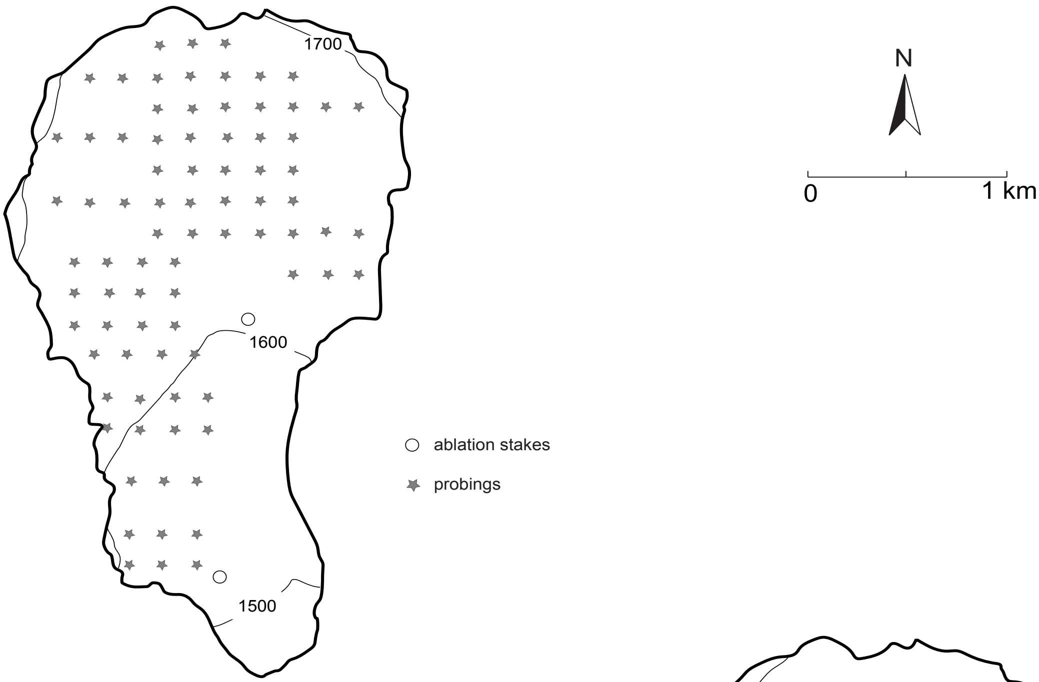
Columbia Glacier on 12 August 2017 (photograph taken by M. Pelto).

Columbia Glacier occupies a deep cirque above Blanca Lake and ranges in altitude from 1,460 to 1,720 m a.s.l. Kyes, Monte Cristo and Columbia Peaks surround the glacier with summits over 2,200 m a.s.l. This glacier has the lowest mean altitude of any substantial glacier in the North Cascades. The glacier is the beneficiary of locally heavy precipitation and orographic lifting over the surrounding peaks causing cooling of the air mass greater than that expected from the elevation of the glacier. Facing southeast, Columbia Glacier is protected from afternoon sun by the peaks. Avalanches spilling from the mountains above descend onto and spread across Columbia Glacier. Nearly a third of the glacier is covered by avalanche fans. Columbia Glacier has retreated 180 m since 1984. A retreat of 90 m has also been observed at the head of the glacier, and the width of the glacier at 1500 m has decreased by 80 m. The reduction in glacier thickness is comparable in the accumulation zone and the ablation zone. The glacier has lost 15 m in thickness since 1984. Detailed annual measurements are made in August, examining all of the measurement points. The transient snowline location is also mapped. The glacier is then rechecked in late September, with the snowline again remapped and any ablation stakes measured.

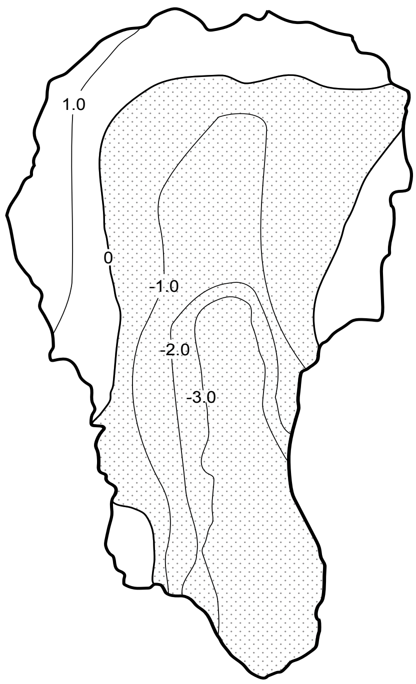
In 2016, the winter freezing level from January to April 20 was not as high as the record from 2015, but still 400 m above the long-term mean. The April 1st snowpack at the long-term SNOTEL sites in the North Cascades was 8% above average. A warm spring altered this, with April being the warmest on record and snow melt remaining high into early June. Fortunately, summer turned out to be cooler, and ablation diminished. Average June-August temperatures were 0.25 °C above the 1984–2016 mean and 1.5 °C below the 2015 mean. In 2017, April 1 snowpack was 110% of normal, by June 1 the snowpack remained well above the last four years and similar to 2012. Summer turned out to be the driest on record in Seattle and tied for the warmest for the June 21 to September 22 period. In the mountains, the overall melt season temperatures for May 1 through September 30 was high, just 0.15 °C cooler than the 2015 values due to a cooler spring. The glacier had an annual mass balance of –1,180 mm w.e. in 2015/16 and an annual balance of –750 mm w.e. in 2016/17. The AAR was 26% in 2016 and 44% in 2017.

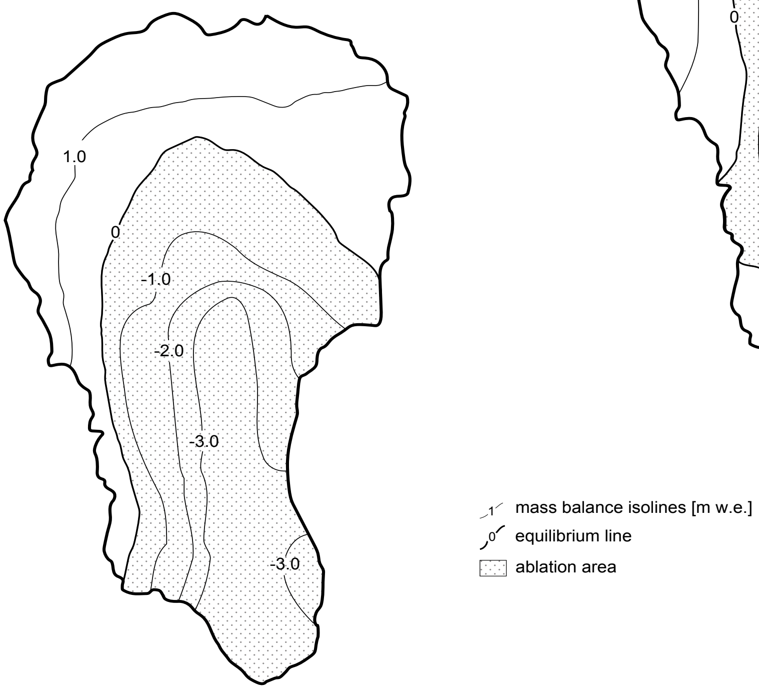
Figure 4.20.1 Topography and observation network and mass balance maps of 2015/16 and 2016/17.

Topography and observational network



Mass balance maps 2015/16 and 2016/17





Columbia Glacier (USA)

Figure 4.20.2   Mass balance versus elevation for 2015/16 and 2016/17.

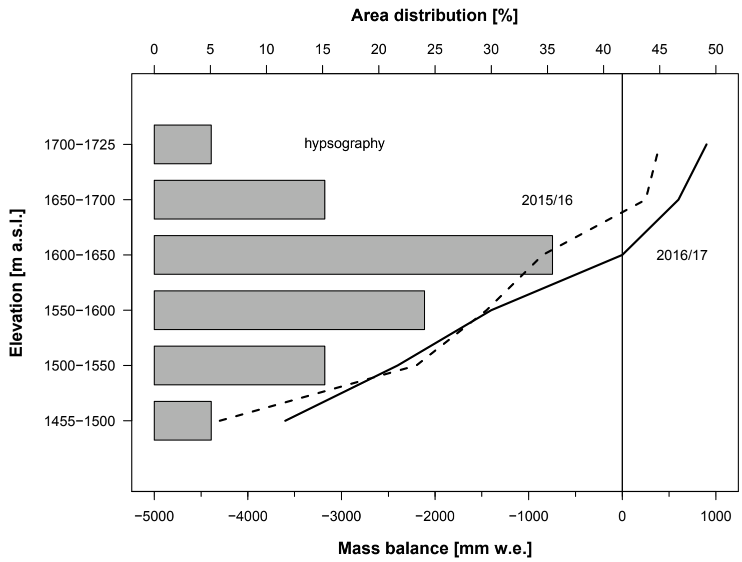


Figure 4.20.3   Glaciological balance versus geodetic balance for the whole observation period.

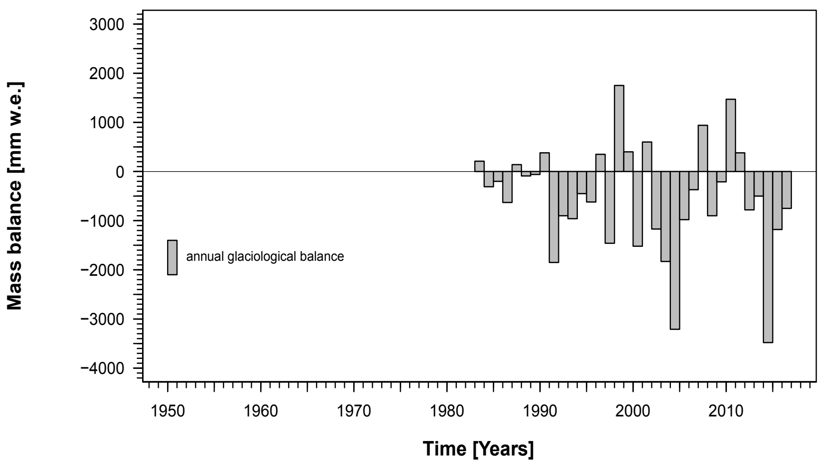
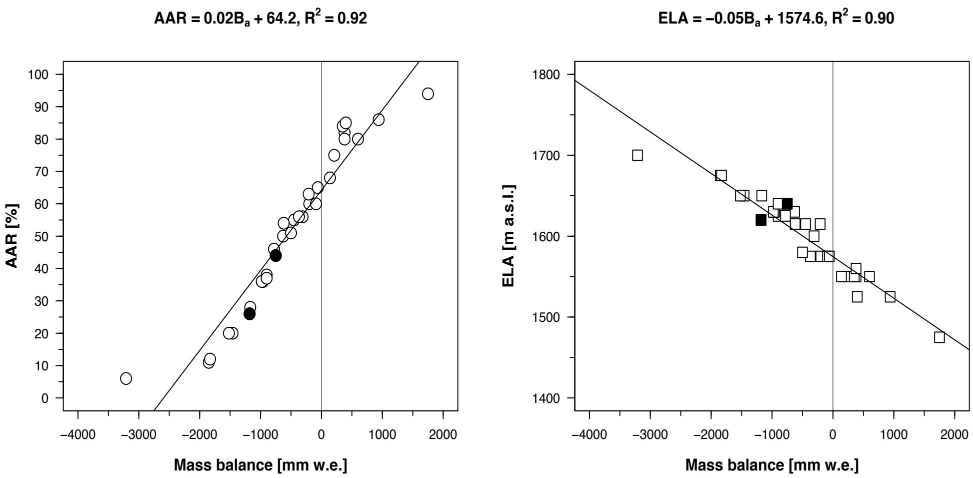


Figure 4.20.4 Accumulation area ratio (AAR) and equilibrium line altitude (ELA) versus specific mass balance for the whole observation period.



5 CONCLUDING REMARKS

Glacier monitoring has been coordinated internationally since 1894. This long-term effort has resulted in the compilation of an unprecedented dataset of changes in glacier length, area, volume, and mass. The dataset has been made freely available by the WGMS and its predecessor organizations and is widely used in scientific studies and assessment reports. The worldwide retreat of glaciers has become one of the most prominent icons of global climate change. Moreover, glacier decline has impacts on the local hazard situation, regional water availability, and global sea level rise.

The retreat of glaciers from their Little Ice Age (LIA) moraines and trimlines can be observed in the field as well as on aerial and satellite images for tens of thousands of glaciers around the world. Large collections of historical and modern photographs (e.g., NSIDC, 2002, updated 2015) document this change in a qualitative manner. The dataset presented here allows these changes to be quantified at samples ranging from a few hundred to thousands of glaciers with observation series. There is a global trend to centennial glacier retreat from LIA maximum positions, with typical cumulative values of several hundred to a few thousand metres.

In various mountain ranges, glaciers with decadal response times have shown intermittent re-advances which, however, were short and thus much less extensive when compared to the overall frontal retreat. The most recent re-advance phases were reported from Scandinavia and New Zealand in the 1990s or from (mainly surge glaciers in) the Karakoram at the beginning of the 21st century. Early (geodetic) mass balance measurements indicate moderate decadal ice losses of a few dm w.e. a^{-1} in the second half of the 19th and at the beginning of the 20th centuries, followed by increased ice losses around 0.4 m w.e. a^{-1} in the 1940s and 1950s. Larger data samples (from both glaciological and geodetic methods) with better global coverage adequately document the period of moderate ice loss which followed between the mid-1960s and mid-1980s, as well as the subsequent acceleration in ice loss to > 0.5 m w.e. a^{-1} in the early 21st century.

In the time period covered by the present bulletin, glaciers observed by the glaciological method lost about 1 m w.e. a^{-1}. This continues the historically unprecedented ice loss observed since the turn of the century and is double the ice loss rates of the 1990s. Recent global assessments estimate and correct for the bias in the glaciological sample (Zemp et al. 2020) and suggest that glaciers are currently contributing 1 mm to mean global sea-level rise, which corresponds to more than a quarter of the observed rise.

With their dynamic response to changes in climatic conditions – growth/reduction in area mainly through the advance/retreat of glacier tongues – glaciers re-adjust their extent to equilibrium conditions of ice geometry with a zero mass balance. Recorded mass balances document the degree of imbalance between glaciers and climate due to the delay in dynamic response caused by the characteristics of ice flow (deformation and sliding); over lengthy time intervals they depend on the rate of climatic forcing. With constant climatic conditions (no forcing), balances would tend towards and finally become zero. Long-term non-zero balances are, therefore, an expression of ongoing climate change and sustained forcing. Trends towards increasing non-zero balances are triggered by accelerated forcing. In the same way, comparison between present-day and past values of mass balance must take the changes in glacier area into account (Elsberg et al., 2001). Many of the relatively small glaciers, measured within the framework of the present mass balance observation network, have lost large percentages of their area during the past decades. The recent increase in the rates of ice loss over diminishing glacier surface areas, as compared with earlier losses related to larger surface areas, becomes even more pronounced and leaves no doubt about the accelerating change in climatic conditions, even if a part of the observed acceleration trend is likely to be caused by positive feedback processes.

Rising snowlines and cumulative mass losses lead to changes in the average albedo and to a continued surface lowering. Such effects cause pronounced positive feedbacks with respect to radiative and sensible heat fluxes.

Albedo changes are especially effective in enhancing melt rates and can also be caused by the input of dust (Oerlemans et al., 2009). The cumulative length change of glaciers is the result of all effects combined, and constitutes the key to a global intercomparison of decadal with secular mass losses. Surface lowering, thickness loss and the resulting reduction in driving stress and flow, however, increasingly replace processes of tongue retreat with processes of downwasting, disintegration or even the collapse of entire glaciers. Moreover, the thickness of most glaciers regularly observed for their mass balance is measured in (a few) tens of metres. From the measured mass losses and thickness reductions, it is evident that several network glaciers with important long-term observations may not survive for many more decades. A special challenge therefore consists in developing a strategy for ensuring the continuity of adequate mass balance observations under such extreme conditions.

Key tasks for the future of glacier mass balance monitoring include the continuation of (long-term) measurement series, the extension of the presently available dataset, especially in under-represented regions (Nussbaumer et al., 2017; Hoelzle et al., 2017), the quantitative assessment of uncertainties relating to available measurements (e.g., Magnússon et al., 2016), and their representativeness for changes in corresponding mountain ranges. The latter requires a well-considered integration of in-situ measurements, remotely sensed observations (e.g., Gardner et al., 2013; Wouters et al., 2019), and numerical modeling (e.g., Huss & Hock, 2018; Hock et al., 2019) taking into account the related spatial and temporal scales.

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7 PRINCIPAL INVESTIGATORS

7.1 PRINCIPAL INVESTIGATORS MASS BALANCE

(in alphabetic order, for observation periods 2015/16, 2016/17, and 2017/18 (for ‘reference‘ glaciers))

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Abbreviation	Sponsoring Agency
ACINN:	Institute of Atmospheric and Cryospheric Sciences (formerly: Institute of Meteorology and Geophysics, IMGI), University of Innsbruck (AT)
AM:	Association Moraine (FR)
ARC:	Antarctic Research Centre, Victoria University of Wellington (NZ)
ARPA:	Agenzia Regionale per la Protezione dell'Ambiente della Valle d'Aosta (IT)
BE-Forest:	Forestry Service of Canton Bern (CH)
CAIAG:	Central Asian Institute of Applied Geosciences (KG)
CAREERI:	Cold and Arid Regions Environment and Engineering Research Institute, Chinese Academy of Sciences (CN)
CAS/ITPR:	Institute of Tibetan Plateau Research, Chinese Academy of Sciences (CN)
CECS:	Glaciology Laboratory, Centro de Estudios Científicos (CL)
CGGBAS:	Commission for Geodesy and Glaciology, Bavarian Academy of Sciences (DE)
CGI:	Comitato Glaciologico Italiano (IT)
CGI-Torino:	Comitato Glaciologico Italiano Torino (IT)
CNR:	Instituto di Ricerca per la Protezione, Consiglio Nazionale delle Ricerche (IT)
CNRS TheMA:	Laboratoire ThéMA, CNRS & Université de Franche-Comté et de Bourgogne (FR)
CNRS:	Centre national de la recherche scientifique (FR)
CNSAS:	Corpo Nazionale Soccorso Alpino e Speleologico (IT)
DES/UU:	Department of Earth Sciences, Uppsala University (SE)
DESA:	Department of Earth Science, Aarhus University (DK)
DGA:	Dirección General de Aguas, Ministerio de Obras Públicas, Gobierno de Chile (CL)
DGUF:	Department of Geosciences, University of Fribourg (CH)
DGUO-NZ:	Department of Geography/Te Ihowhenua, University of Otago (NZ)
DHAS:	Department of Hydrospheric-Athmospheric Sciences, Graduate School of Environmental Studies, Nagoya University (JP)
FES NCU:	Faculty of Earth Sciences, Nicolaus Copernicus University in Toruń (PL)
FGUA:	Federal Government of Upper Austria (AT)
GEM-CB:	Greenland Ecosystem Monitoring - Climate Basis (GL)
GEUS Geology:	Department of Quaternary Geology, The Geological Survey of Denmark and Greenland (DK)
GIUZ:	Department of Geography, University of Zurich (CH)
GLACIOLAB:	GLACIOLAB (FR)
GL-Forest:	Forestry Service of Canton Glarus (CH)
GR-Forest:	Forestry Service of Canton Graubünden (CH)
GSC:	Natural Resources Canada, Geological Survey of Canada (CA)
GTF:	Gobierno de Tierra del Fuego (AR)
HD/GFKU:	Hydrometeorology Department, Geoscience Faculty of Kabul University (AF)
HD/LT:	Hydrologischer Dienst, Land Tirol (AT)
HD/SB:	Hydrografischer Dienst, Land Salzburg (AT)
HU/ILTS:	Institute of Low Temperature Science, Hokkaido University (JP)

Abbreviation	Sponsoring Agency
HVL:	Department of Environmental Sciences, Western Norway University of Applied Sciences (NO)
IAA-DG:	Departamento de Glaciología, Instituto Antártico Argentino (AR)
IAA-UNC:	Instituto Antártico Argentino Convenio DNA, Facultad de Ciencias Exactas Físicas y Naturales, Universidad Nacional de Córdoba (AR)
IANIGLA:	Instituto Argentino de Nivología, Glaciología y Ciencias Ambientales, CCT CONICET Mendoza (AR)
ICIMOD:	International Centre for Integrated Mountain Development (NP)
IDEAM:	Instituto de Hidrología, Meteorología y Estudios Ambientales, Subdirección de Ecosistemas e Información Ambiental (CO)
IES:	Institute of Earth Sciences, University of Iceland (IS)
IGE:	Institut des Géosciences de l'Environnement (formerly: Laboratoire de Glaciologie et Géophysique de l'Environnement, LGGE), Université Grenoble Alpes, CNRS, IRD (FR)
IGNANKaz:	Institute of Geography, National Academy of Sciences of the Kazakh Republic (KZ)
IGRAN:	Institute of Geography of the Siberian Branch, Russian Academy of Science (RU)
IGS-IMO:	Iceland Glaciological Society, Icelandic Meteorological Office (IS)
IMAU	Institute for Marine and Atmospheric Research Utrecht, University of Utrecht (NL)
IMO:	Icelandic Meteorological Office (IS)
INAMHI:	Programa Glaciares Ecuador, Instituto Nacional de Meteorología e Hidrología (EC)
INK:	Department of Physical Geography and Quaternary Geology, University of Stockholm (SE)
INRAE:	Institut national de recherche pour l'agriculture, l' alimentation et l' environnement (FR)
IRD:	Institut de Recherche pour le Développement (FR)
IRSTEA:	Institut national de recherche en sciences et technologies pour l'environnement et l'agriculture (FR)
ITAC:	Italian Alpine Club (IT)
JIRP:	Juneau Icefield Research Project, Nicols College (US)
LMU	Departement für Geographie, Ludwig-Maximilians-Universität (DE)
MeteoTrentino:	Meteo Trentino (IT)
MGU:	Geographical Faculty, Moscow State University (RU)
NCGCP:	North Cascade Glacier Climate Project, Nichols College (US)
NCNP:	Sandalee Marblemount Ranger Station, North Cascades National Park (US)
NERSC:	Nansen Environmental and Remote Sensing Center (NO)
NGI:	Norwegian Geotechnical Institute (NO)
NIWA:	National Institute of Water and Atmospheric Research (NZ)
NPC:	National Power Company (IS)
NPI:	Norwegian Polar Institute, Polar Environmental Centre (NO)
NVE:	Norwegian Water Resources and Energy Directorate (NO)
ÖAV:	Österreichischer Alpenverein (AT)
OW-Forest:	Forestry Service Canton Obwalden (CH)
PAS:	Institute of Geophysics, Polish Academy of Sciences (PL)
RFBR:	Russian Foundation of Basic Research (RFBR-18-05-00420) (RU)
SAT:	Comitato Glaciologico Trentino, Società degli Alpinisti Tridentini (IT)
SGAA:	Servizio Glaciologico Alto Adige (IT)
SG-Forest:	Forestry Service of Canton St. Gallen (CH)

Abbreviation	Sponsoring Agency
SGL:	Servizio Glaciologico Lombardo (IT)
SMI:	Società Meteorologica Italiana (IT)
SUP:	Department of Geomorphology, University of Silesia (PL)
TCSM:	Tateyama Caldera Sabo Musium (JP)
TI-Forest:	Forestry Service of Canton Ticino (CH)
TshMRC:	The Tien-Shan High Mountain Research Center Power, Institute of Water Problems and Hydro Power (KG)
TU/G:	Department of Geography, Trent University (CA)
UACH:	Instituto de Ciencias Físicas y Matemáticas, Facultad de Ciencias, Universidad Austral de Chile (CL)
UCant/DG:	Dept. Of Geography, University of Canterbury (NZ)
UGRH/ANA:	Unidad de Glaciología y Recursos Hídricos, Autoridad National del Agua (PE)
UI/HA:	Ufficio Idrografico / Hydrographisches Amt, Provincia autonoma di Bolzano - Alto Adige / Autonome Provinz Bozen - Südtirol (IT)
UMSA:	Instituto de Investigaciones Geológicas y del Medio Ambiente, Universidad Mayor de San Andres (BO)
UNTDF:	Universidad Nacional de Tierra del Fuego (AR)
Uottawa/DG:	Department of Geography, University of Ottawa (CA)
UP/TeSAF:	Dept. of Land, Environment, Agriculture and Forestry, University of Padua (IT)
UPM/ETSIT:	ETSI Telecomunicación, Universidad Politécnica de Madrid (ES)
UPV:	Departamento de Ingeniería del Terreno, Universidad Politécnica de Valencia (ES)
UR-Forest:	Forestry Service of Canton Uri (CH)
US/FES:	Faculty of Earth Sciences, University of Silesia (PL)
USGS-F:	Alaska Science Center, Glaciology, U.S. Geological Survey (US)
USGS-GNP:	United States Geological Survey Glacier National Park (US)
USGS-T:	Washington Water Science Center, U.S. Geological Survey (US)
VAW:	Laboratory of Hydraulics, Hydrology and Glaciology, ETH Zurich (CH)
VD-Forest:	Forestry Service of Canton Vaud (CH)
VS-Forest:	Forestry Service of Canton Valais (CH)
VUB:	Vrije Universiteit Brussel (BE)
ZAMG:	Zentralanstalt für Meteorologie und Geodynamik (AT)

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APPENDIX

The Appendix includes the data reported for the observation periods covered by the current Bulletin (i.e. 2015/16 and 2016/17).

It starts with explanatory notes on the completion of the Excel-based data submission forms, as sent out with the corresponding calls-for-data:

NOTES ON THE COMPLETION OF THE DATA SHEETS

- Notes on the completion of the data sheet "A GENERAL INFORMATION"
- Notes on the completion of the data sheet "AA GLACIER ID LOOKUP TABLE"
- Notes on the completion of the data sheet "B STATE"
- Notes on the completion of the data sheet "C FRONT VARIATION"
- Notes on the completion of the data sheet "D CHANGE"
- Notes on the completion of the data sheet "E MASS BALANCE OVERVIEW"
- Notes on the completion of the data sheet "EE MASS BALANCE"
- Notes on the completion of the data sheet "EEE MASS BALANCE POINT"
- Notes on the completion of the data sheet "F SPECIAL EVENT"

The notes on the completion of the data sheets A–F describe all attributes compiled during the call-for-data, whereas the Tables 1 to 6 in this bulletin provide a summary of the collected data. Full details, including all attributes as well as reported special events, are stored in, and available from, the *Fluctuations of Glaciers* (FoG) database.

The WGMS website provides access to information on available data, to procedures for data order and data submission as well as to the addresses of National Correspondents. Website and database can be accessed via:

https://www.wgms.ch

A - GENERAL INFORMATION

NOTES ON THE COMPLETION OF THE DATA SHEET

This data sheet should be completed in cases of new glacier entries related to available fluctuation data[#]; for glaciers already existing in the FoG database, POLITICAL UNIT (A1), GLACIER NAME (A2) AND WGMS ID (A3) are to be used in data sheets B to F.

A1 - POLITCAL UNIT [alphabetic code; 2 digits]
Name of country or territory in which glacier is located (for 2 digit abbreviations, see ISO 3166 country code, available at www.iso.org).
Political unit is part of WGI key (positions 1 and 2).
Political unit is part of PSFG key (positions 1 and 2).

A2 - GLACIER NAME [alpha-numeric code; up to 60 digits]
The name of the glacier, written in CAPITAL letters.
Format: max. 60 column positions.
If necessary, the name can be abbreviated; in this case, please give the full name under “A16 - REMARKS”.

A3 - WGMS ID [numeric code; 5 digits]
5 digit key identifying glaciers in the FoG database of the WGMS.
For new glacier entries, this key is assigned by the WGMS.

A4 - GEOGRAPHICAL LOCATION (GENERAL) [alpha-numeric code; up to 30 digits]
Refers to a large geographical entity (e.g. a large mountain range or large politcal subdivision) which gives a rough idea of the location of the glacier, without requiring the use of a map or an atlas. Examples: Western Alps, Southern Norway, Polar Ural, Tien Shan, Himalayas.

A5 - GEOGRAPHICAL LOCATION (SPECIFIC) [alpha-numeric code; up to 30 digits]
Refers to a more specific geographical location (e.g. mountain group, drainage basin), which can be found easily on a small scale map of the country concerned. Examples: Rhone Basin, Jotunheimen.

A6 - LATITUDE [decimal degree North or South; up to 6 digits]
The geographical coordinates should refer to a point in the upper ablation area; for small glaciers, this point may lie outside the glacier.
Latitude should be given in decimal degrees, positive values indicating the northern hemisphere and negative values indicating the southern hemisphere.
Latitude should be given to a maximum precision of 4 decimal places.

A7 - LONGITUDE [decimal degree East or West; up to 7 digits]
The geographical coordinates should refer to a point in the upper ablation area; for small glaciers, this point may lie outside the glacier.
Longitude should be given in decimal degrees, positive values indicating east of zero meridian and negative values indicating west of zero meridian.
Longitude should be given to a maximum precision of 4 decimal places.

A8 - CODE [numeric code; 3 digits]
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

[#] For new glacier entries, you may check the World Glacier Inventory (WGI) or the GLIMS database for existing information:
+ WGI: https://nsidc.org/data/glacier_inventory/index.html
+ GLIMS: https://www.glims.org

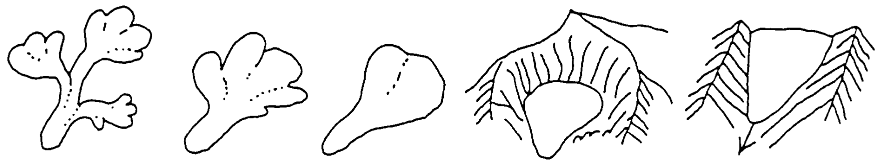
A8a - PRIMARY CLASSIFICATION - Digit 1

0	Miscellaneous	Any type not listed below (please explain)
1	Continental ice sheet	Inundates areas of continental size
2	Icefield	Ice masses of sheet or blanket type of a thickness insufficient to obscure the subsurface topography
3	Ice cap	Dome-shaped ice masses with radial flow
4	Outlet glacier	Drains an ice sheet, icefield or ice cap, usually of valley glacier form; the catchment area may not be easily defined
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 particularly heavy accumulation in certain years; usually no marked flow pattern is visible; in existence for at least two consecutive years.
8	Ice shelf	Floating ice sheet of considerable thickness attached to a coast nourished by a 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

Note: The parent glacier concept (cf. A15 - PARENT GLACIER) can be used for the classification of complex glacier systems (e.g., ice cap or icefield with outlet glaciers) or of disintegrating/coalescing glaciers over time.

A8b - FORM – Digit 2

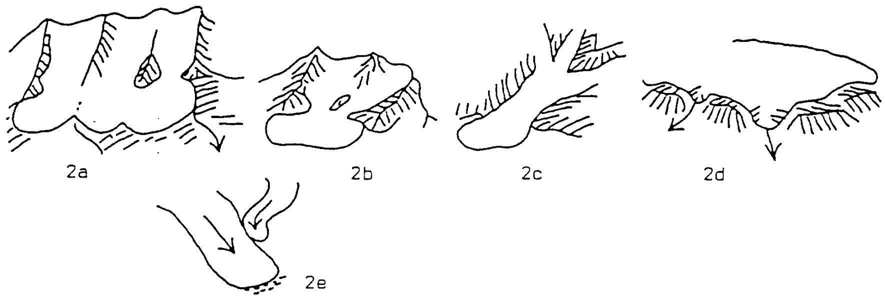
0	Miscellaneous	Any type not listed below (please explain)
1	Compound basins	Two or more individual valley glaciers issuing from tributary valleys and coalescing (Fig. 1a)
2	Compound basin	Two or more individual accumulation basins feeding one glacier system (Fig. 1b)
3	Simple basin	Single accumulation 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 a V-shaped gulley or depression on a mountain slope (Fig. 1e); generally more common than 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 mountain slope or ridge
8	Group	A number of similar ice masses in close proximity and too small to be assessed individually
9	Remnant	Inactive, usually small ice masses left by a receding glacier



1a 1b 1c 1d 1e

A8c - FRONTAL CHARACTERISTICS – Digit 3

0	Miscellaneous	Any type not listed below (please explain)
1	Piedmont	Icefield formed on a lowland area 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 ice calving which would be recognisable 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)	



A9 - EXPOSITION OF ACCUMULATION AREA [cardinal point; up to 2 digits]
The main orientation of the accumulation area using the 8 cardinal points (8-point compass).

A10 - EXPOSITION OF ABLATION AREA [cardinal point; up to 2 digits]
The main orientation of the accumulation area using the 8 cardinal points (8-point compass).

A11 - PARENT GLACIER [numeric code; 5 digits]
Links separated glacier parts with (former) parent glacier, using WGMS ID (see "A3 - WGMS ID").

A12 - REMARKS [alpha-numeric]
Any important information or comments not included above may be given here. Comments about the uncertainty of the numerical data may be made, including quantative comments. Only significant decimals should be given.

A13 - GLACIER REGION [alphabetic code; 3 digits]
3-digit code assigning each glacier to one of 19 first-order regions (cf. GTN-G 2017, https://dx.doi.org/10.5904/gtng-glacreg-2017-07). For new glacier entries, this key is assigned by the WGMS.

A14 - GLACIER SUBREGION [alpha-numeric code; 6 digits]
6-digit code assigning each glacier to one of >90 second-order regions (cf. GTN-G 2017, https://dx.doi.org/10.5904/gtng-glacreg-2017-07). For new glacier entries, this key is assigned by the WGMS.

AA - GLACIER ID LOOKUP TABLE

NOTES ON THE COMPLETION OF THE DATA SHEET

This data sheet is completed by the WGMS and aims at linking the WGMS_ID as used in the FoG database to glacier identifiers in other databases, such as to the PSFG_ID, the WGI_ID, the GLIMS_ID, and the RGI_ID.

AA1 - POLITCAL UNIT [alphabetic code; 2 digits]
Name of country or territory in which glacier is located (cf. "A1 - POLITICAL UNIT").

AA2 - GLACIER NAME [alpha-numeric code; up to 30 digits]
The name of the glacier, written in CAPITAL letters. Use the same spelling as in "A2 - GLACIER NAME".

AA3 - WGMS ID [numeric code; 5 digits]
5 digit key identifying glaciers in the FoG database of the WGMS (cf. "A3 – WGMS ID"). This key is assigned by the WGMS.

AA4 - PSFG ID [alpha-numeric code; 7 digits]
7 digit key identifying glaciers in the FoG publication series. The key was introduced by the "Permanent Service for the Fluctuations of Glaciers" (PSFG), one of the predecessor services of the WGMS. This key is assigned by the National Correspondents according to existing national glacier inventories or similar glacier numerations.

The PSFG ID consists of 7 digits, starting with 2-character political unit followed by 4 or, as an exception, 5 alpha-numerical digits. Empty spaces are filled with the digit 0.

AA5 - WGI ID [alpha-numeric code; 12 digits]
12 digit key identifying glaciers in the World Glacier Inventory. The key is assigned to the glaciers as defined by Müller (1978) combining the five following elements:
+ 2-character political unit
+ 1-digit continent code
+ 4-character drainage code
+ 2-digit free position code
+ 3-digit local glacier code

Empty spaces are filled with the digit 0. This key is assigned by WGMS and NSIDC. More information is found in Müller (1978) and on the WGI webpage: https://www.gtn-g.ch/data_catalogue_wgi/

AA6 - GLIMS ID [alpha-numeric code; 14 digits]
14 digit key identifying glaciers in the GLIMS database. The identifier has the format GxxxxxxEyyyyyΘ, where xxxxxx is longitude east of the Greenwich meridian in millidegrees, yyyyy is north or south latitude in millidegrees, and Θ is N or S depending on the hemisphere. This key is assigned by NSIDC. More information is found on the GLIMS webpage: https://www.glims.org/MapsAndDocs/

AA7 - RGI ID [alpha-numeric code; 14 digits]
14 digit key identifying glaciers in the RGI database. The identifier has the format RGIvv-rr.nnnnn, where vv is the version number, rr is the first-order region number and nnnnn is an arbitrary identifying code that is unique with in the region. These codes were assigned as sequential positive integers at the first-order (not second-order) level, but they should not be assumed to be sequential numbers, or even to be numbers. In general the identifying code of each glacier, nnnnn, should not be expected to be the same in different RGI versions. This key is assigned by the RGI Working Group. More information is found on the RGI webpage: https://www.glims.org/RGI/index.html

AA8 - REMARKS [alpha-numeric]
Any important information or comments not included above may be given here.

B - STATE

NOTES ON THE COMPLETION OF THE DATA SHEET

This data sheet should be completed in order to report length, area and elevation range of glaciers with available fluctuation data.

B1 - POLITCAL UNIT [alphabetic code; 2 digits]
Name of country or territory in which glacier is located (cf. “A1 - POLITICAL UNIT”).

B2 - GLACIER NAME [alpha-numeric code; up to 30 digits]
The name of the glacier, written in CAPITAL letters. Use the same spelling as in
“A2 - GLACIER NAME”.

B3 - WGMS ID [numeric code; 5 digits]
5 digit key identifying glaciers in the FoG database of the WGMS (cf. “A3 – WGMS ID”).

B4 - YEAR [year]
Year of present survey.

B5 - MAXIMUM ELEVATION OF GLACIER [m a.s.l.]
Altitude of the highest point of the glacier.

B6 - MEDIAN ELEVATION OF GLACIER [m a.s.l.]
Altitude of the contour line which halves the area of the glacier.

B7 - MINIMUM ELEVATION OF GLACIER [m a.s.l.]
Altitude of the lowest point of the glacier.

B8 - ELEVATION UNCERTAINTY [m]
Estimated random uncertainty of reported elevations.

B9 - LENGTH [km]
Maximum length of glacier measured along the most important flowline (in horizontal projection).

B10 - LENGTH UNCERTAINTY [km]
Estimated random uncertainty of reported length.

B11 - AREA [km^2]
Glacier area (in horizontal projection) in the survey YEAR.

B12 - AREA UNCERTAINTY [km^2]
Estimated random uncertainty of reported area.

B13 - SURVEY DATE [numeric; 8 digits]
Date of present survey.
For each survey, please indicate the complete date in numeric format (YYYYMMDD).
Missing data: For unknown day or month, put “99” in the corresponding position(s) and make a note under “B16 - REMARKS”.

B14 - SURVEY PLATFORM & METHOD [alphabetic code; 2 digits]
The survey platform and method should be given using the following alphabetic code:

Platform (first digit, lower case)	Method (second digit, upper case)
t: terrestrial	R: reconstructed (e.g., from landforms)
a: airborne	M: derived from maps
s: spaceborne	G: ground survey (e.g., GPS, tachymetry, tape)
c: combined	P: photogrammetry
x: unknown	L: laser altimetry or scanning
	Z: radar altimetry or interferometry
	C: combined (explain under B16 REMARKS)
	X: other (explain under B16 REMARKS)

B15 - INVESTIGATOR [alpha-numeric; 255 digits]
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.

B16 - SPONSORING AGENCY [alpha-numeric; 255 digits]
Full name, abbreviation and address of the agency where the data are held.

B17 - REFERENCE [alpha-numeric; 255 digits]
Reference to publication related to above data and methods.
Use short format such as: Author et al. (YYYY); Journal, V(I), X-XX p.

B18 - REMARKS [alpha-numeric]
Any important information or comments not included above may be given here as well as short references to related publications. Comments about the uncertainty of the numerical data may be made, including quantative comments. Only significant decimals should be given.

C - FRONT VARIATION

NOTES ON THE COMPLETION OF THE DATA SHEET

This data sheet should be completed in order to report glacier length change records mainly from in-situ and remote sensing measurements.*

C1 - POLITCAL UNIT [alphabetic code; 2 digits]
Name of country or territory in which the glacier is located (cf. “A1 - POLITICAL UNIT”).

C2 - GLACIER NAME [alpha-numeric code; up to 60 digits]
The name of the glacier, written in CAPITAL letters. Use the same spelling as in “A2 - GLACIER NAME”.

C3 - WGMS ID [numeric code; 5 digits]
5 digit key identifying glaciers in the FoG database of the WGMS (cf. “A3 – WGMS ID”).

C4 - YEAR [year]
Year of present survey.

C5 - FRONT VARIATION [m]
Variation in the position of the glacier front (in horizontal projection) between the previous and present survey.

Positive values: advance
Negative values: retreat

C6 - FRONT VARIATION UNCERTAINTY [m]
Estimated random uncertainty of reported front variation.

C7 - QUALITATIVE VARIATION [alphabetic code; 2 digits]
If no quantitative data are available for a particular year, but qualitative data are available, then the front variation should be denoted using the following symbols. They should be positioned in the far left of the data field.

+X : Glacier in advance
-X : Glacier in retreat
ST : Glacier stationary
SN : Glacier front covered by snow making survey impossible.

Qualitative variations will be understood with reference to the previous survey data, whether this data is qualitative or quantitative.

C8 - SURVEY DATE [numeric; 8 digits]
Date of present survey.
For each survey, please indicate the complete date in numeric format (YYYYMMDD).
Missing data: For unknown day or month, put “99” in the corresponding position(s) and make a note under “C14 - REMARKS”.

C9 - SURVEY PLATFORM & METHOD [alphabetic code; 2 digits]
The survey platform and method should be given using the following alphabetic code:

Platform (first digit, lower case)	Method (second digit, upper case)
t: terrestrial	R: reconstructed (e.g., historical sources, geomorphological evidence, dating of moraines)
a: airborne	M: derived from maps
s: spaceborne	G: ground survey (e.g., GPS, tachymetry, tape)
c: combined	P: photogrammetry
x: unknown	L: laser altimetry or scanning
	Z: radar altimetry or interferometry
	C: combined (explain under C14 REMARKS)
	X: other (explain under C14 REMARKS)

* For the submission of front variation series mainly based on reconstruction methods (e.g., paintings, drawings, written sources, photography, maps, and moraine dating), please contact the WGMS staff.

C10 - REFERENCE DATE [numeric, 8 digits]
Date of previous survey
For each survey, please indicate the complete date in numeric format (YYYYMMDD).
Missing data: For unknown day or month, put “99” in the corresponding position(s) and make a note under “C14 - REMARKS”.

C11 - INVESTIGATOR [alpha-numeric; 255 digits]
Name(s) of the person(s) or agency doing the fieldwork and/or the name(s) of the person(s) or agency processing the data.

C12 - SPONSORING AGENCY [alpha-numeric; 255 digits]
Full name, abbreviation and address of the agency where the data are held.

C13 - REFERENCE [alpha-numeric; 255 digits]
Reference to publication related to above data and methods.
Use short format such as: Author et al. (YYYY); Journal, V(I), X-XX p.

C14 - REMARKS [alpha-numeric]
Any important information or comments not included above may be given here as well as short references to related publications. Comments about the uncertainty of the numerical data may be made, including quantative comments. Only significant decimals should be given.

D - CHANGE

NOTES ON THE COMPLETION OF THE DATA SHEET

This data sheet should be completed in order to report changes in thickness, area and volume from geodetic surveys and/or area data of glaciers with available fluctuation data.

D1 - POLITCAL UNIT [alphabetic code; 2 digits]
Name of country or territory in which glacier is located (cf. “A1 - POLITICAL UNIT”).

D2 - GLACIER NAME [alpha-numeric code; up to 60 digits]
The name of the glacier, written in CAPITAL letters. Use the same spelling as in “A2 - GLACIER NAME”.

D3 - WGMS ID [numeric code; 5 digits]
5 digit key identifying glaciers in the FoG database of the WGMS (cf. “A3 – WGMS ID”).

D4 - SURVEY ID [numeric code]
Numeric key identifying data records related to a specific glacier survey in the FoG database of the WGMS. This key is assigned by the WGMS in order to distinguish results from different surveys (and sources) for the same glacier and survey period.

D5 - YEAR [year]
Year of present survey.

D6 - LOWER BOUNDARY [m a.s.l.]
Lower boundary of altitude interval.
If refers to entire glacier, then lower bound = 9999.

D7 - UPPER BOUNDARY [m a.s.l.]
Upper boundary of altitude interval.
If refers to entire glacier, then upper bound = 9999.

D8 - AREA SURVEY YEAR [km^2]
Glacier area of each altitude interval (in horizontal projection) in the survey YEAR.

D9 - AREA CHANGE [1000 m^2]
Area change for each altitude interval.

D10 - AREA CHANGE UNCERTAINTY [1000 m^2]
Estimated random uncertainty of reported area change.

D11 - THICKNESS CHANGE [mm]
Specific ice thickness change for each altitude interval.

D12 - THICKNESS CHANGE UNCERTAINTY [mm]
Estimated random uncertainty of reported thickness change.

D13 - VOLUME CHANGE [1000 m^3]
Ice volume change for each altitude interval.

D14 - VOLUME CHANGE UNCERTAINTY [1000 m^3]
Estimated random uncertainty of reported volume change.

D15 - SURVEY DATE [numeric; 8 digits]
Date of present survey.
For each survey, please indicate the complete date in numeric format (YYYYMMDD).
Missing data: For unknown day or month, put “99” in the corresponding position(s) and make a note under “D22 - REMARKS”.

D16 - SURVEY DATE PLATFORM & METHOD [alphabetic code; 2 digits]
The survey platform and method applied at the survey date should be given using the following alphabetic code:

Platform (first digit, lower case)	Method (second digit, upper case)
t: terrestrial	R: reconstructed (e.g., from landforms)
a: airborne	M: derived from maps
s: spaceborne	G: ground survey (e.g., GPS, tachymetry, tape)
c: combined	P: photogrammetry
x: unknown	L: laser altimetry or scanning
	Z: radar altimetry or interferometry
	C: combined (explain under D22 REMARKS)
	X: other (explain under D22 REMARKS)

D17 - REFERENCE DATE [numeric; 8 digits]
Date of previous survey.
For each survey, please indicate the complete date in numeric format (YYYYMMDD).
Missing data: For unknown day or month, put "99" in the corresponding position(s) and make a note under "D22 - REMARKS".

D18 - REFERENCE DATE PLATFORM & METHOD [alphabetic code; 2 digits]
The survey platform and method applied at the reference date should be given using the alphabetic code given under D16.

D19 - INVESTIGATOR [alpha-numeric; 255 digits]
Name(s) of the person(s) or agency doing the fieldwork and/or the name(s) of the person(s) or agency processing the data.

D20 - SPONSORING AGENCY [alpha-numeric; 255 digits]
Full name, abbreviation and address of the agency where the data are held.

D21 - REFERENCE [alpha-numeric; 255 digits]
Reference to publication related to above data and methods.
Use short format such as: Author et al. (YYYY); Journal, V(I), X-XX p.

D22 - REMARKS [alpha-numeric]
Any important information or comments not included above may be given here as well as short references to related publications. Comments about the uncertainty of the numerical data may be made, including quantative comments. Only significant decimals should be given.

E - MASS BALANCE OVERVIEW

NOTES ON THE COMPLETION OF THE DATA SHEET

This data sheet should be completed in order to report glacier mass balance data measured by the direct glaciological method.

E1 - POLITCAL UNIT [alphabetic code; 2 digits]
Name of country or territory in which glacier is located (cf. “A1 - POLITICAL UNIT”).

E2 - GLACIER NAME [alpha-numeric code; up to 60 digits]
The name of the glacier, written in CAPITAL letters. Use the same spelling as in
“A2 - GLACIER NAME”.

E3 - WGMS ID [numeric code; 5 digits]
5 digit key identifying glaciers in the FoG database of the WGMS (cf. “A3 – WGMS ID”).

E4 - YEAR [year]
Year of present survey.

E5 - TIME MEASUREMENT SYSTEM [alphabetic code; 3 digits]
The time measurement system should be given using the following 3 digit alphabetic code:

FLO = floating-date system
FXD = fixed-data system
STR = stratigraphic system
COM = combined system; usually of STR and FXD according Mayo et al. (1972)
OTH = other

Please give floating survey dates in E6-E8 for all time systems and explain methodological details (e.g., fixed calendar dates and correction methods) under “E23 - REMARKS”.

Note that FLO was newly introduced in 2011 in order to reduce earlier ambiguities. Before that, mass balance results based on the floating-date system were (at least theoretically) reported as OTH. For definitions of the above time measurement systems and more details see Cogley et al. (2011).

E6 - BEGINNING OF SURVEY PERIOD [numeric; 8 digits]
Date on which survey period began.
For each survey, please indicate the complete date in numeric format (YYYYMMDD).
Missing data: For unknown day or month, put “99” in the corresponding position(s) and make a note under “E23 - REMARKS”.

E7 - END OF WINTER SEASON [numeric; 8 digits]
Date of end of winter season.
If known, please indicate the complete date in numeric format (YYYYMMDD).
Missing data: For unknown day or month, put “99” in the corresponding position(s) and make a note under “E23 - REMARKS”.

E8 - END OF SURVEY PERIOD [numeric; 8 digits]
Date on which survey period ended.
For each survey, please indicate the complete date in numeric format (YYYYMMDD).
Missing data: For unknown day or month, put “99” in the corresponding position(s) and make a note under “E23 - REMARKS”.

E9a - ELA PREFIX [alphabetic code, 1 digit]
Prefix denoting if the equilibrium line was below (“<”) or above (“>”) the minimum or maximum elevation of the glacier, respectively. Leave this field empty if the mean altitude of the equilibrium line was within the glacier elevation range.

E9b - EQUILIBRIUM LINE ALTITUDE [m a.s.l.]
Mean alititude (averaged over the glacier) of the end-of-mass-balance-year equilibrium line (ELA). Give glacier minimum or maximum elevation if the ELA was below or above the elevation range of the glacier, respectively.

E10 - ELA UNCERTAINTY [m]
Estimated random uncertainty of reported ELA.

E11 - MINIMUM NUMBER OF MEAS. SITES USED IN ACCUMULATION AREA [numeric]
The minimum number of different sites at which measurements were taken in the accumulation area. Repeat measurements may be taken for one site, in order to obtain an average value for that site, but the site is still only counted once. Minimum and maximum values can be used to indicate different numbers of measurements carried out for (i) winter and annual balance surveys or (ii) for different accumulation measurement types (e.g., snow pits versus snow probings).

E12 - MAXIMUM NUMBER OF MEAS. SITES USED IN ACCUMULATION AREA [numeric]
The maximum number of different sites at which measurements were taken in the accumulation area. Repeat measurements may be taken for one site, in order to obtain an average value for that site, but the site is still only counted once. Minimum and maximum values can be used to indicate different numbers of measurements carried out for (i) winter and annual balance surveys or (ii) for different accumulation measurement types (e.g., snow pits versus snow probings).

E13 - MINIMUM NUMBER OF MEAS. SITES USED IN ABLATION AREA [numeric]
The minimum number of different sites at which measurements were taken in the ablation area. Repeat measurements may be taken for one site, in order to obtain an average value for that site, but the site is still only counted once. Minimum and maximum values can be used to indicate different numbers of measurements carried out for (i) winter and annual balance surveys.

E14 - MAXIMUM NUMBER OF MEAS. SITES USED IN ABLATION AREA [numeric]
The maximum number of different sites at which measurements were taken in the ablation area. Repeat measurements may be taken for one site, in order to obtain an average value for that site, but the site is still only counted once. Minimum and maximum values can be used to indicate different numbers of measurements carried out for (i) winter and annual balance surveys.

E15 - ACCUMULATION AREA [km^2]
Accumulation area in horizontal projection.

E16 - ACCUMULATION AREA UNCERTAINTY [km^2]
Estimated random uncertainty of reported accumulation area.

E17 - ABLATION AREA [km^2]
Ablation area in horizontal projection.

E18 - ABLATION AREA UNCERTAINTY [km^2]
Estimated random uncertainty of reported ablation area.

E19 - ACCUMULATION AREA RATIO [%]
Accumulation area divided by the total area, multiplied by 100. Given in percent.

E20 - INVESTIGATOR [alpha-numeric; 255 digits]
Name(s) of the person(s) or agency doing the fieldwork and/or the name(s) of the person(s) or agency processing the data.

E21 - SPONSORING AGENCY [alpha-numeric; 255 digits]
Full name, abbreviation and address of the agency where the data are held.

E22 - REFERENCE [alpha-numeric; 255 digits]
Reference to publication related to above data and methods.
Use short format such as: Author et al. (YYYY); Journal, V(I), X-XX p.

E23 - REMARKS [alpha-numeric]
Any important information or comments not included above may be given here as well as short references to related publications. Comments about the uncertainty of the numerical data may be made, including quantative comments. Only significant decimals should be given.

EE - MASS BALANCE

NOTES ON THE COMPLETION OF THE DATA SHEET

This data sheet should be completed in order to report glacier mass balance data with values related to the data given in data sheet E.

EE1 - POLITCAL UNIT [alphabetic code; 2 digits]
Name of country or territory in which glacier is located (cf. “A1 - POLITICAL UNIT”).

EE2 - GLACIER NAME [alpha-numeric code; up to 60 digits]
The name of the glacier, written in CAPITAL letters. Use the same spelling as in
“A2 - GLACIER NAME”.

EE3 - WGMS ID [numeric code; 5 digits]
5 digit key identifying glaciers in the FoG database of the WGMS (cf. “A3 – WGMS ID”).

EE4 - YEAR [year]
Year of present survey.

EE5 - LOWER BOUNDARY OF ALTITUDE INTERVAL [m a.s.l.]
If refers to entire glacier, then lower bound = 9999.

EE6 - UPPER BOUNDARY OF ALTITUDE INTERVAL [m a.s.l.]
If refers to entire glacier, then lower bound = 9999.

EE7 - ALTITUDE INTERVAL AREA [km^2]
Area of each altitude interval (in horizontal projection).

EE8 - SPECIFIC WINTER BALANCE [mm w.e.]
Specific means the total value divided by the total glacier area under investigation.
Specific winter balance equals the net winter balance divided by the total area of the glacier.

EE9 - SPECIFIC WINTER BALANCE UNCERTAINTY [mm w.e.]
Estimated random uncertainty of reported winter balance.

EE10 - SPECIFIC SUMMER BALANCE [mm w.e.]
Specific means the total value divided by the total glacier area, in this case, it is the net summer balance divided by the total area of the glacier.

EE11 - SPECIFIC SUMMER BALANCE UNCERTAINTY [mm w.e.]
Estimated random uncertainty of reported winter balance.

EE12 - SPECIFIC ANNUAL BALANCE [mm w.e.]
Annual mass balance of glacier divided by the area of the glacier.

EE13 - SPECIFIC ANNUAL BALANCE UNCERTAINTY [mm w.e.]
Estimated random uncertainty of reported annual balance.

EE14 - REMARKS [alpha-numeric]
Any important information or comments not included above may be given here. Comments about the uncertainty of the numerical data may be made, including quantitative comments. Only significant decimals should be given.

EEE - MASS BALANCE POINT

NOTES ON THE COMPLETION OF THE DATA SHEET

This data sheet should be completed in order to report point mass balance data. Values related to glacier-wide balances (cf. data sheet EE) need to be denoted in EEE13 BALANCE_CODE.

EEE1 - POLITCAL UNIT [alphabetic code; 2 digits]
Name of country or territory in which glacier is located (cf. “A1 - POLITICAL UNIT”).

EEE2 - GLACIER NAME [alpha-numeric code; up to 60 digits]
The name of the glacier, written in CAPITAL letters. Use the same spelling as in “A2 - GLACIER NAME”.

EEE3 - WGMS ID [numeric code; 5 digits]
5 digit key identifying glaciers in the FoG database of the WGMS (cf. “A3 – WGMS ID”).

EEE4 - YEAR [year]
Year of present survey.

EEE5 - FROM DATE [numeric; 8 digits]
Date on which survey period began. Please indicate the complete date in numeric format YYYYMMDD. Missing data: For unknown day or month, put “99” in the corresponding position(s) and make a note under “E23 - REMARKS”

EEE6 - TO DATE [numeric; 8 digits]
Date on which survey period ended. Please indicate the complete date in numeric format YYYYMMDD. Note: the first four digits of TO DATE correspond to EEE4 YEAR. Missing data: For unknown day or month, put “99” in the corresponding position(s) and make a note under “E23 - REMARKS”.

EEE7 - POINT ID [alpha-numeric; 4 digits]
4 digit key indentifying the stake or pit.

EEE8 - POINT LATITUDE [decimal degree North or South; up to 6 digits]
Latitude of stake or pit given in decimal degrees, positive values indicating the northern hemisphere and negative values indicating the southern hemisphere. Latitude should be given to a maximum precision of 4 decimal places.

EEE9 - POINT LONGITUDE [decimal degree East or West; up to 7 digits]
Longitude of stake or pit given in decimal degrees, positive values indicating east of zero meridian and negative values indicating west of zero meridian. Longitude should be given to a maximum precision of 4 decimal places.

EEE10 - POINT ELEVATION [m a.s.l.]
Elevation above sea level of stake or pit.

EEE11 – POINT BALANCE [mm w.e.]
Mass balance at this observation point between FROM DATE and TO DATE.

EEE12 – POINT BALANCE UNCERTAINTY [mm w.e.]
Estimated random uncertainty of reported point balance.

EEE13 – DENSITY [kg m^{-3}]
Measured or assumed density used to convert the height readings (in mm) to point balances (in mm w.e.).

EEE14 – DENSITY UNCERTAINTY [kg m^{-3}]
Estimated random uncertainty of reported density.

EEE15 - BALANCE CODE [alphabetic code; 2 digits]
Code used to denote point balances used for the calculation of glacier-wide balances:
BW = winter balance (cf. data sheet EE8)
BS = summer balance (cf. data sheet EE10)
BA = annual balance (cf. data sheet EE12)
IN = balance at index point not used for glacier-wide balance calculations

EEE16 - REMARKS [alpha-numeric]
Any important information or comments not included above, such as type of point location.

F - SPECIAL EVENT

NOTES ON COMPLETION OF THE DATA SHEET

This data sheet should be completed in cases of extraordinary events, especially concerning glacier hazards and dramatic changes in glaciers.

F1 - POLITCAL UNIT [alphabetic code; 2 digits]
Name of country or territory in which glacier is located (cf. “A1 - POLITICAL UNIT”).

F2 - GLACIER NAME [alpha-numeric code; up to 60 digits]
The name of the glacier, written in CAPITAL letters. Use the same spelling as in “A2 - GLACIER NAME”.

F3 - WGMS ID [numeric code; 5 digits]
5 digit key identifying glaciers in the FoG database of the WGMS (cf. “A3 – WGMS ID”).

F4 - EVENT ID [numeric code]
Numeric key identifying special event in the FoG database of the WGMS. This key is assigned by the WGMS in order to distinguish different events reported for the same glacier and event date (e.g. in the case of unknown event date: “99999999”).

F5 - EVENT DATE [numeric; 8 digits]
Date of event. For each event, please indicate the complete date in numeric format (YYYYMMDD).
Missing data: For unknown day or month, put “99” in the corresponding position(s) and make a note under “F7 - EVENT DESCRIPTION”. For events lasting for several days, please indicate the date of the main event, and describe the sequence of the event under “F7 - EVENT DESCRIPTION”.

F6 - EVENT TYPE [binary code; 6 digits]
Indicate the involved event type(s) using 1 = event type involved and 0 = event type not involved for the following event types:

F6a - GLACIER SURGE
F6b - CALVING INSTABILITY
F6c - GLACIER FLOOD (including debris flow, mudflow)
F6d - ICE AVALANCHE
F6e - TECTONIC EVENT (earthquake, volcanic eruption)
F6f - OTHER

F7 - EVENT DESCRIPTION [alpha-numeric]
Please give quantitative information wherever possible, for example:
- Glacier surge: Date and location of onset, duration, flow or advance velocities, discharge anomalies and periodicity;
- Calving instability: Rate of retreat, iceberg discharge, ice flow velocity and water depth at calving front;
- Glacier flood (including debris flow, mudflow): Outburst volume, outburst mechanism, peak discharge, sediment load, outreach distance, and propagation velocity of flood wave or front of debris flow / mudflow;
- Ice avalanche: Volume released, runout distance, overall slope (ratio of vertical drop height to horizontal travel distance) of avalanche path;
- Tectonic event: Volumes, runout distances and overall slopes (ratio of vertical drop height to horizontal travel distance) of rockslides on glacier surfaces, amount of geothermal melting in craters, etc.

F8 - INVESTIGATOR [alpha-numeric; 255 digits]
Name(s) of the person(s) or agency doing the fieldwork and/or the name(s) of the person(s) or agency processing the data.

F9 - SPONSORING AGENCY [alpha-numeric; 255 digits]
Full name, abbreviation and address of the agency that sponsored the survey and/or where the data are held.

F10 - REFERENCE [alpha-numeric; 255 digits]

Reference to publication related to above data and methods.

Use short format such as: Author et al. (YYYY); Journal, V(I), X-XX p.

F11 - REMARKS [alpha-numeric]

Any important information or comments not included above may be given here. Comments about the uncertainty of the numerical data may be made, including quantative comments. Only significant decimals should be given.

APPENDIX - Table 1

GENERAL INFORMATION ON THE OBSERVED GLACIERS 2016–2017

GLACIER NAME	Name of the glacier in capital letters, up to 30 alpha-numeric digits
WGMS ID	Key identifier of the glacier in the FoG database, assigned by the WGMS, up to 5 numeric digits
PSFG NR	Identifier of the glacier in line with existing national inventories, assinged by the National Correspondents, up to 5 numeric digits with 2 alphabetic digits prefix denoting country (cf. www.iso.org)
REGION	Code for geographical location of the glacier in of 19 macro-scale regions, 3 alphabetic digits
LAT	Latitude in decimal degrees north (positive) or south (negative)
LON	Longitude in decimal degrees east (positive) or west (negative)
CODE	3 digits giving primary classification, form, and frontal characteristics of the glacier (cf. Notes on the Completion of the Data Sheets)
EXP ACC	Exposition of the accumulation area (cardinal point)
EXP ABL	Exposition of the ablation area (cardinal point)
ELEV MAX	Maximum elevation of the glacier in metres above sea level*
ELEV MED	Median elevation of the glacier in metres above sea level*
ELEV MIN	Mininum elevation of the glacier in metres above sea level*
AREA	Total area of the glacier in km^2*
LEN	Total length of the glacier in km*
DATA TYPE	2 = Variations in the positions of glacier fronts reported for 2015/16 and 2016/17
	3 = Mass balance summary data reported for 2015/16 and 2016/17
	4 = Mass balance versus elevation data reported for 2015/16 and 2016/17
	5 = Mass balance point data reported for 2015/16 and 2016/17
	6 = Changes in area, volume and thickness from geodetic surveys

* these are the last reported values which may not correspond to the same survey year

GLACIER_NAME	WGMS_ID	PSFG_NR	REGION	LAT	LON	CODE	EXP-ACC	EXP-ABL	ELEV-MAX	ELEV-MED	ELEV-MIN	AREA	LEN	DATA_TYPE
AQ - Antarctica														
BAHIA DEL DIABLO	2665		ANT	-63.82	-57.43	4-3-8	NE	E	630	390	38	12.9	7.6	23456
HURD	3367		ANT	-62.688	-60.402	4-3-3	W	W	334		4	4		-3--6
JOHNSONS	3366		ANT	-62.669	-60.354	4-2-4	NW	NW	356		0	5.4		-3--6
AR - Argentina														
AGUA NEGRA	4532		SAN	-30.165	-69.809	6-3-8	SE	SE	5208	5015	4760	1	2.02	23--6
ALFA	10453		SAN	-33.077	-70.065	6-3-6	NE	NE	5337		4615	1	1.722	2----
ALTO DEL PLOMO	922	AR5007	SAN	-32.99	-70.007	5-1-7	S	S	5195	5015	3881	15.2	8.757	2----
AZUFRE	2851		SAN	-35.29	-70.55	5-3-8	E	E	3978	3350	3067	3.1	3	2----
BAJO DEL PLOMO	10455		SAN	-33.012	-69.966	5-1-7	SE	SW	5232		4124	16.4	7.468	2----
BETA	10454		SAN	-33.088	-70.057	6-0-6	NE	NE	5805		4060	2.2	3.504	2----
BROWN SUPERIOR	3903		SAN	-29.983	-69.642	6-3-8	E	NE	5115	5060	4965	0.2	0.57	-3--6
CAMISA	3591		SAN	-33.771	-69.866	5-2-9	S	SE	5955	5000	3934	22.5	6.6	2----
COBRE	10457		SAN	-34.997	-70.327	X-X-X			3892		3451	5.2	3.815	2----
CONCONTA NORTE	3902		SAN	-29.976	-69.645	6-3-8	E	E	5125	5050	4950	0.1	0.52	-3--6
DE LOS TRES	1675		SAN	-49.33	-73	5-4-4	SE	SE	1960		1205	0.8	1.462	-3456
ESPERANZA NORTE	3711		SAN	-42.131	-72.053	X-X-X			2400		1080	11.2	4.94	2----
FRIAS	1347	AR5004	SAN	-41.15	-71.83	5-3-8	NE	E	3100	2300	1350	7.3	6.59	2----
GUSSFELDT	2848		SAN	-32.61	-70.03	5-2-6	E	E	5564	4979	4384	11	6.34	2----
LOS AMARILLOS	3904		SAN	-29.296	-69.995	6-3-8	SE	SE	5535	5275	4915	0.8	1.53	-3--6
MARMOLEJO	3590		SAN	-33.731	-69.857	5-3-9	SE	SE	6083	5300	3420	10.8	9.5	2----
MARTIAL ESTE	2000		SAN	-54.78	-68.4	6-4-6	SE	SE	1180	1074	960	0.1	0.35	-3456
PENON	2850		SAN	-35.27	-70.56	5-2-5	E	NE	4063	3650	3313	2.8	1.478	2----
SAN JOSE	3593		SAN	-33.821	-69.876	5-2-9	SE	SE	5550	4600	3253	9.3	6.9	2----
TUPUNGATO 01	2852		SAN	-33.39	-69.75	5-0-7	SE	NE	6560	5300	4405		8.06	2----
VACAS	2849		SAN	-32.55	-69.99	5-2-6	E	E	5478	4787	4014	16.9	5.018	2----
AT - Austria														
AEU.PIRCHLKAR	504	AT0229	CEU	47	10.92	6-0-6	SE	NE	3260	3030	2720	0.9	1.9	2----
ALPEINER F.	497	AT0307	CEU	47.05	11.13	5-2-8	N	NE	3340	2930	2310	3.9	4.6	2----
BACHFALLEN F.	500	AT0304	CEU	47.08	11.08	6-0-8	N	N	3120	2850	2580	2.5	2.9	2----
BAERENKOPF K.	567	AT0702	CEU	47.14	12.723	6-2-4	N	N	3400	3030	2270	2.5	3.1	2----
BERGLAS F.	496	AT0308	CEU	47.07	11.12	6-0-8	E	NE	3290	2990	2490	1.5	2.5	2----
BIELTAL F.	481	AT0105A	CEU	46.88	10.13	6-0-6	NW	NW	3000	2740	2544	0.7	1.1	2----
BRENNKOGL K.	528	AT0727	CEU	47.1	12.8	6-4-6	N	N	2960	2670	2430	0.6	1.2	2----
DAUNKOGEL F.	604	AT0310A	CEU	47	11.1	6-0-8	NE	NE	3240	2880	2550	2.7	2.9	2----
DIEM F.	513	AT0220	CEU	46.811	10.945	6-0-8	NW	NW	3540	3060	2710	3.5	3.4	2----
EISKAR G.	1632	AT1301	CEU	46.62	12.9	6-4-6	N	N	2390	2250	2160	0.2	0.4	2----
FERNAU F.	601	AT0312	CEU	46.98	11.13	6-4-8	NW	N	3310	2850	2380	2	2.5	2----
FIRMISAN F.	4337		CEU	46.827	10.95	X-X-X	W	W				0.8		2----
FREIWAND K.	564	AT0706	CEU	47.1	12.75	6-4-8	SE	SE	3130	2890	2690	0.3	1.1	2----
FROSNITZ K.	579	AT0507	CEU	47.08	12.4	6-3-6	E	E	3330	2780	2400	4.2	4.4	2----
GAISKAR F.	530	AT0325	CEU	46.97	11.12	6-4-8	SE	SE	3190	3070	2890	0.8	1.1	2----
GAISSBERG F.	508	AT0225	CEU	46.83	11.07	5-2-8	NW	NW	3390	2850	2460	1.4	3.3	2----
GEPATSCH F.	522	AT0202	CEU	46.85	10.77	5-2-8	NE	N	3536	3057	2060	17.3	8.2	2----
GOESSNITZ K.	532	AT1201	CEU	46.97	12.75	6-4-7	NW	NW	3060	2690	2520	0.9	1.5	2----
GOLDBERG K.	1305	AT0802B	CEU	47.04	12.97	6-4-8	SE	NE	3080	2680	2350	1	2.8	234--
GR. GOSAU G.	536	AT1101	CEU	47.48	13.6	6-4-6	NW	NW	2810	2520	2250	1.5	2.2	2----
GROSSELEND K.	542	AT1001	CEU	47.03	13.32	6-3-6	NW	NW	3140	2720	2410	2.8	2.4	2----
GRUENAU F.	599	AT0315	CEU	46.98	11.2	6-4-8	N	N	3411	2958	2388	1.6	2.24	2----
GURGLER F.	511	AT0222	CEU	46.8	10.98	5-2-8	NW	N	3420	2990	2270	11.9	8	2----
GUSLAR F.	490	AT0210	CEU	46.85	10.8	6-4-8	E	SE	3480	3120	2780	2.6	2.5	2----
HALLSTAETTER G.	535	AT1102	CEU	47.48	13.62	6-0-8	NE	NE	2910	2560	2200	2.8	2.3	234--
HAUER F.	10458		CEU	47.047	10.912	6-5-8	NE	NE						2----
HINTEREIS F.	491	AT0209	CEU	46.8	10.77	5-2-8	E	NE	3715	3064	2500	6.4	6.56	23456
HOCHALM K.	538	AT1005	CEU	47.02	13.33	6-3-6	E	E	3350	2880	2540	3.2	2.4	2----
HOCHJOCH F.	492	AT0208	CEU	46.78	10.82	5-2-6	N	NW	3500	3030	2300	2.6	3.8	2----
HORN K. (SCHOB.)	531	AT1202	CEU	46.97	12.77	6-4-8	N	NW	3010	2780	2600	0.5	1.1	2----
HORN K. (ZILLER)	589	AT0402	CEU	47	11.82	5-3-8	N	N	3217	2819	2119	3.1	3	2----
INN. PIRCHLKAR	505	AT0228	CEU	47	10.92	6-5-6	E	NE	3340	2990	2720	0.6	1.8	2----
JAMTAL F.	480	AT0106	CEU	46.858	10.156	5-2-8	N	N	3120	2780	2450	2.8	2.8	234-6
KAELBERSPITZ K.	540	AT1003	CEU	47.03	13.28	6-0-8	N	N	2890	2690	2450	0.8	2.2	2----
KALSER BAERENKOPF K.	2676		CEU	47.11	12.6	X-X-X								2----
KARLINGER K.	568	AT0701	CEU	47.13	12.7	6-2-4	NE	N	3340	2800	2060	4	3.6	2----
KESSELWAND F.	507	AT0226	CEU	46.838	10.793	6-3-8	SE	E	3493	3190	2850	3.6	3.58	-3456
KLEINEISER K.	555	AT0717	CEU	47.15	12.67	6-4-6	NW	NW	2880	2730	2620	0.2	0.7	2----
KLEINELEND K.	541	AT1002	CEU	47.07	13.25	6-3-4	NE	NE	3190	2750	2150	3	2.7	2----
KLEINFLEISS K.	547	AT0801	CEU	47.053	12.947	6-0-6	W	W	3080	2840	2700	0.8	2.3	234--
KLOSTERTALER M	485	AT0102B	CEU	46.87	10.07	6-0-8	W	W	3220	2940	2640	0.4	1.6	2----
KRIMMLER K.	584	AT0501A	CEU	47.08	12.25	6-2-6	NW	NW	3490	2550	1910	7.5	3.5	2----
LANDECK K.	569	AT0604	CEU	47.13	12.58	6-4-6	N	N	2940	2600	2430	0.4	0.9	2----
LANGTALER F.	510	AT0223	CEU	46.789	11.019	5-3-8	N	NW	3420	2910	2450	3.5	5.1	2----
LATSCH F.	4338		CEU	46.855	10.962	X-X-X	NW	NW				1.7		2----
MARZELL F.	515	AT0218	CEU	46.78	10.88	5-2-8	NW	N	3620	3160	2450	5.1	4.4	2----
MAURER K. (GLO.)	558	AT0714	CEU	47.18	12.68	6-4-6	W	W	2890	2730	2610	0.5	1.4	2----
MITTERKAR F.	487	AT0214	CEU	46.88	10.87	6-4-6	SE	SE	3580	3230	2960	1.1	2.1	2----
NIEDERJOCH F.	516	AT0217	CEU	46.78	10.87	5-2-8	N	N	3600	3100	2690	2.9	3	2----
OBERSULZBACH K.	583	AT0502	CEU	47.111	12.293	5-1-8	NW	NW	3600	2730	1990	15.3	5.7	-3---
OCHSENTALER G.	483	AT0103	CEU	46.85	10.1	5-2-8	N	N	3160	2910	2400	2.6	2.8	2----
OEDENWINKEL K.	559	AT0712	CEU	47.11	12.645	5-3-9	NW	NW	3180	2590	2130	2	3.8	2----
PASTERZE	566	AT0704	CEU	47.1	12.7	5-2-8	SE	SE	3600	2990	2000	16.3	9.4	234-6
PFAFFEN F.	591	AT0324	CEU	46.965	11.135	6-4-8	W	W	3470	3060	2770	1.2	1.8	2----
RETTENBACH F.	488	AT0212	CEU	46.93	10.93	6-4-6	N	N	3350	2920	2610	1.8	2.5	2----
ROFENKAR F.	518	AT0215	CEU	46.88	10.88	6-4-4	SE	SE	3750	3290	2820	1.3	2.2	2----
ROTER KNOPF K.	3297		CEU	46.97	12.75	X-X-X								2----
ROTMOOS F.	509	AT0224	CEU	46.82	11.05	6-2-8	N	N	3410	2960	2370	3.2	3.3	2----
SCHALF F.	514	AT0219	CEU	46.78	10.93	5-2-8	NW	NW	3500	3130	2500	8.5	5.6	2----
SCHLADMINGER G.	534	AT1103	CEU	47.47	13.63	6-4-6	NE	NE	2700	2600	2420	0.8	0.9	2----
SCHLATEN K.	580	AT0506	CEU	47.112	12.384	5-1-8	NE	NE	3670	2810	1940	11.3	6.3	2----
SCHMIEDINGER K.	548	AT0726	CEU	47.18	12.68	6-0-6	NE	NE	3160	2750	2410	1.8	2	2----
SCHNEEGLOCKEN	525	AT0109	CEU	46.87	10.1	6-4-6	NE	NE	3020	2770	2570	0.7	1.2	2----
SCHNEELOCH G.	533	AT1104	CEU	47.5	13.6	6-4-8	NW	NW	2530	2300	2190	0.2	0.8	2----
SCHWARZENBERG F.	501	AT0303	CEU	47.05	11.12	6-3-8	SE	SW	3490	3030	2590	1.8	2.9	2----
SCHWARZKARL K.	556	AT0716	CEU	47.17	12.67	6-4-6	NW	NW	2970	2750	2560	0.5	1.2	2----
SCHWEIKERT F.	4336		CEU	47.028	10.81	X-X-X	NW	NW				0.8		2----

GLACIER_NAME	WGMS_ID	PSFG_NR	REGION	LAT	LON	CODE	EXP-ACC	EXP-ABL	ELEV-MAX	ELEV-MED	ELEV-MIN	AREA	LEN	DATA_TYPE
SEEKARLES F.	10459		CEU	46.977	10.815	6-5-8	E	E						2----
SEXEGERTEN F.	520	AT0204	CEU	46.9	10.8	6-2-8	N	NE	3470	2950	2560	2.8	2.9	2----
SIMILAUN F.	3296		CEU	46.78	10.88	X-X-X								2----
SIMONY K.	575	AT0511	CEU	47.07	12.27	6-0-9	SE	SE	3490	2810	2230	4.2	3.5	2----
SPIEGEL F.	512	AT0221	CEU	46.83	10.95	6-4-8	NW	NW	3430	3080	2780	1.1	1.7	2----
STUBACHER SONNBLICK K.	573	AT0601A	CEU	47.13	12.6	6-0-6	NE	E	3050	2780	2500	0.9	1.5	23--6
SULZTAL F.	503	AT0301	CEU	47	11.08	5-2-8	N	N	3350	2860	2290	4.5	4.1	2----
TASCHACH F.	519	AT0205	CEU	46.902	10.849	5-2-8	N	NW	3760	3130	2240	8.2	5.6	2----
TOTENFELD	524	AT0110	CEU	46.88	10.15	6-4-8	NE	NE	3040	2790	2550	0.7	1.5	2----
TOTENKOPF K.	2680		CEU	47.13	12.66	X-X-X								2----
TRIEBENKARLAS F.	592	AT0323	CEU	46.956	11.15	6-4-8	W	W	3460	3040	2760	1.8	2	2----
UMBAL K.	574	AT0512	CEU	47.05	12.25	5-3-8	SW	SW	3440	2850	2230	7.3	5	2----
UNT. RIFFL K.	605	AT0713B	CEU	47.13	12.67	6-4-9	N	NW	2910	2530	2290	1	2	2----
UNTERSULZBACH K.	582	AT0503	CEU	47.13	12.35	5-2-8	N	NW	3670	2720	2070	5.9	6.3	2----
VENEDIGER K.	10460		CEU	47.125	12.34	5-3-8	W	W	3400		2400	2		-34--
VERBORGENBERG F.	593	AT0322	CEU	47.07	11.12	6-4-6	E	E	3260	3000	2780	0.9	1.3	2----
VERMUNT G.	482	AT0104	CEU	46.85	10.13	6-2-8	NW	NW	3130	2790	2500	2.2	2.8	2----
VERNAGT F.	489	AT0211	CEU	46.88	10.82	6-2-6	S	SE	3585	3149	2850	7.1	2.6	23456
VILTRAGEN K.	581	AT0505	CEU	47.13	12.37	5-2-8	NE	E	3480	2660	2190	4.3	4.5	2----
W. TRIPP K.	539	AT1004	CEU	47.02	13.32	6-4-6	SE	S	3230	2880	2780	0.6	1.5	2----
WASSERFALLWINKL	565	AT0705	CEU	47.12	12.72	6-3-8	SE	S	3150	2870	2610	1.9	2.5	2----
WAXEGG K.	590	AT0401	CEU	47	11.8	6-3-6	NE	N	3327	2848	2424	3.1	1.97	2----
WEISSEE F.	523	AT0201	CEU	46.85	10.72	6-0-8	N	N	3530	2970	2540	3.5	3.4	2----
WILDGERLOS	587	AT0404	CEU	47.151	12.106	6-0-8	N	N	3260	2650	2110	3.7	2.8	2----
WINKL K.	537	AT1006	CEU	47.02	13.32	6-4-8	W	W	3100	2710	2390	0.7	1.5	2----
WURTEN K.	545	AT0804	CEU	47.039	13.005	6-2-8	SW	S	3120	2680	2550	0.3	3	23456
ZETTALUNITZ/MULLWITZ K.	578	AT0508	CEU	47.08	12.38	6-3-8	SW	SW	3470	2980	2650	2.8	4.5	234--
BO - Bolivia														
CHARQUINI SUR	2667		TRP	-16.303	-68.107	X-X-X	S	S	5384	5209	5034	0.3	0.282	2345-
ZONGO	1503	BO5150	TRP	-16.28	-68.14	5-3-8	S	E	6107	5511	4914	1.8	1.825	23456
CA - Canada														
DEVON ICE CAP NW	39	CA0431	ACN	75.42	-83.25	3-0-3	NW	NW	1820	1200	0	1688	50	-3---
HELM	45	CA0855	WNA	49.958	-122.987	6-2-6	NW	NW	2150	1900	1700	0.8	2.4	-3--6
MEIGHEN ICE CAP	16	CA1335	ACN	79.95	-99.13	3-0-3			260	600	90	58	56	-3---
MELVILLE SOUTH ICE CAP	3690		ACN	75.4	-115	3-0-0			715		526	51		-3---
PEYTO	57	CA1640	WNA	51.66	-116.564	5-3-8	NE	NE	3190	2640	2100	11.4	5.3	-3---
PLACE	41	CA1660	WNA	50.425	-122.601	5-3-8	NE	NW	2610	2089	1800	3.2	4.2	-3--6
WHITE	0	CA2340	ACN	79.45	-90.695	5-1-5	SE	SE	1782	1160	75	38.5	14	-3456
CH - Switzerland														
ADLER	3801	CH0016B	CEU	46.01	7.87	6-2-8	W	W	4119	3465	2981	2	3.06	-3456
ALBIGNA	1674	CH0116	CEU	46.302	9.644	X-X-X	N	N	3077	2491	2179	2.5	3.42	2----
ALLALIN	394	CH0011	CEU	46.05	7.93	6-2-6	N	E	4180	3323	2693	9.6	6.77	23456
ALPETLI (KANDER)	439	CH0109	CEU	46.48	7.8	5-3-6	NW	SW	3211	2791	2307	12.2	6.28	2----
AMMERTEN	435	CH0111	CEU	46.42	7.53	6-0-7	NW	NW	3240	2720	2350	1.9	2.8	2----
AROLLA (BAS)	377	CH0027	CEU	45.98	7.5	5-1-9	N	N	3649	3086	2168	5.4	5.11	2----
BASODINO	463	CH0104	CEU	46.42	8.48	6-3-6	NE	NE	3178	2886	2600	1.8	1.5	23456
BIFERTEN	422	CH0077	CEU	46.82	8.95	5-3-8	E	NE	3602	2883	2004	2.5	4.4	2----
BLUEMLISALP	436	CH0064	CEU	46.5	7.77	6-1-6	NW	NW	3646	2986	2338	2.2	2.47	2----
BOVEYRE	459	CH0041	CEU	45.972	7.256	5-2-9	NW	NW	3617	3256	2691	1.6	2.59	2----
BRENEY	368	CH0036	CEU	45.97	7.42	5-1-7	S	SW	3814	3348	2576	7	6.25	2----
BRESCIANA	465	CH0103	CEU	46.5	9.03	6-3-6	W	W	3368	3127	2934	0.5	0.75	2----
BRUNEGG	384	CH0020	CEU	46.14	7.72	5-3-0	NW	NW	3791	3165	2624	5.5	4.72	2----
BRUNNI	427	CH0072	CEU	46.73	8.78	6-2-4	E	N	3275	2726	2564	2.3	3.52	2----
CALDERAS	403	CH0095	CEU	46.53	9.707	6-1-7	N	NE	3260	3085	2773	0.7	1.16	2----
CAMBRENA	399	CH0099	CEU	46.393	9.994	6-1-4	NE	NE	3252	2974	2493	1.3	2.03	2----
CAVAGNOLI	464	CH0119	CEU	46.45	8.48	6-2-8	NE	E	2810	2714	2542	0.4	1.17	2----
CHEILLON	375	CH0029	CEU	46	7.42	5-1-7	N	N	3629	2961	2684	3.6	3.83	2----
CLARIDENFIRN	2660	CH0141	CEU	46.846	8.901	6-0-0			3251		2534	4.6		-3456
CORBASSIERE	366	CH0038	CEU	45.98	7.3	5-1-9	N	N	4319	3234	2326	15.1	9.75	23456
CORNO	468	CH0120	CEU	46.45	8.38	6-5-6	N	N	2884	2747	2601	0.1	0.57	2----
CORVATSCH SOUTH	4535		CEU	46.415	9.822	X-X-X	E	E	3423		3036	0.2		-345-
CROSLINA	1681	CH0121	CEU	46.43	8.73	X-X-X	NE	NE	3033	2802	2722	0.1	0.45	2----
DAMMA	429	CH0070	CEU	46.63	8.45	6-1-6	E	NE	3311	2869	2062	4.2	2.15	2----
EIGER	442	CH0059	CEU	46.567	7.985	6-1-6	W	NW	3720	3088	2400	1.5	2.59	2----
FEE NORTH	392	CH0013	CEU	46.08	7.88	6-0-6	NE	NE	4360	3260	2135	16.7	5.1	2----
FERPECLE	379	CH0025	CEU	46.02	7.58	5-3-8	NW	N	3668	3280	2140	9	6.07	2----
FINDELEN	389	CH0016	CEU	46	7.87	5-1-6	NW	W	3937	3322	2553	12.9	6.86	23456
FIRNALPELI	424	CH0075	CEU	46.78	8.47	6-0-6	NW	N	2920	2680	2172	1.2	1.1	2----
FORNO	396	CH0102	CEU	46.3	9.7	5-1-9	N	N	3324	2721	2231	6.2	5.8	2----
GAMCHI	440	CH0061	CEU	46.512	7.794	6-1-9	N	N	2765	2230	1958	1.2	1.79	2----
GAULI	449	CH0052	CEU	46.62	8.18	5-1-6	E	E	3611	2935	2140	11.3	6.38	2----
GIETRO	367	CH0037	CEU	46	7.38	6-3-4	NW	W	3817	3229	2751	5.3	4.45	23456
GLAERNISCH	418	CH0080	CEU	47	8.98	6-2-6	W	W	2903	2532	2355	1.4	2.32	2----
GORNER	391	CH0014	CEU	45.97	7.8	5-1-9	N	NW	4576	3351	2173	51.3	13.43	2----
GRAND DESERT	373	CH0031	CEU	46.07	7.342	6-3-6	NW	N	3215	2961	2801	1.1	1.74	2----
GRAND PLAN NEVE	455	CH0045	CEU	46.25	7.15	6-4-7	N	N	2539	2458	2375	0.1	0.34	2----
GRIES	359	CH0003	CEU	46.445	8.34	5-3-4	NE	NE	3307	2945	2432	4.3	5.48	23456
GRIESS (KLAUSEN)	425	CH0074	CEU	46.83	8.83	6-1-7	N	NW	3080	2420	2223	2.5	1.3	2----
GRIESSEN (OBWALDEN)	423	CH0076	CEU	46.85	8.5	6-2-6	W	NW	2830	2609	2479	0.9	1.65	2----
GROSSER ALETSCH	360	CH0005	CEU	46.5	8.03	5-1-9	SE	S	4126	3153	1649	78.2	23.58	2----
HINTERSULZFIRN	419	CH0079	CEU	46.88	9.05	6-5-8	N	N	2086	1956	1815	0.2	0.96	2----
HOHLAUB	3332		CEU	46.059	7.918	X-X-X			4022		2850	2.1		23456
KALTWASSER	363	CH0007	CEU	46.25	8.08	6-0-6	NW	W	3262	2967	2757	1.5	1.88	2----
KEHLEN	431	CH0068	CEU	46.68	8.42	5-1-8	SE	SE	3311	2783	2161	1.7	3.39	2----
KESSJEN	393	CH0012	CEU	46.065	7.928	6-5-6	NE	NE	3223	2969	2873	0.3	0.33	2----
LAEMMERN (WILDSTRUBEL)	437	CH0063	CEU	46.4	7.55	6-1-6	E	E	3231	3005	2558	2.3	2.5	2----
LANG	386	CH0018	CEU	46.459	7.928	5-1-9	SW	SW	3890	3001	2086	8.2	6.39	2----
LAVAZ	416	CH0082	CEU	46.63	8.93	6-1-8	NE	N	3020	2580	2428	1.8	2.6	2----
LENTA	414	CH0084	CEU	46.513	9.038	5-2-7	N	N	3379	2944	2393	0.8	2.3	2----
LIMMERN	421	CH0078	CEU	46.813	8.977	6-2-7	NE	NE	3404	2779	2328	1.9	3.13	2----
LISCHANA	400	CH0098	CEU	46.77	10.35	6-5-9	NW	NW	3030	2880	2800	0.2	0.6	2----
MOIRY	380	CH0024	CEU	46.08	7.6	5-1-8	N	N	3640	3194	2388	4.9	5.07	2----
MOMING	381	CH0023	CEU	46.08	7.67	6-0-9	N	NW	4057	3148	2539	5.2	3.26	2----

GLACIER_NAME	WGMS_ID	PSFG_NR	REGION	LAT	LON	CODE	EXP-ACC	EXP-ABL	ELEV-MAX	ELEV-MED	ELEV-MIN	AREA	LEN	DATA_TYPE
MONT DURAND	369	CH0035	CEU	45.92	7.33	5-1-9	E	NE	4058	3057	2402	6	5.5	2----
MONT MINE	378	CH0026	CEU	46.02	7.55	5-1-9	NW	N	3711	3230	2023	9.8	5.44	2----
MORTERATSCH, VADRET DA	1673	CH0094	CEU	46.4	9.93	5-1-9	N	N	3972	3011	2021	14.2	7.42	2--5-
MURTEL VADRET DAL	4339		CEU	46.408	9.824	X-X-X	E	E	3321	3167	3050	0.3	0.98	-3456
MUTT	472	CH0002	CEU	46.55	8.42	6-5-6	NW	NW	2944	2774	2649	0.4	1.01	2----
OBERAAR	451	CH0050	CEU	46.535	8.22	5-2-4	NE	NE	3388	2878	2310	3.7	4.654	---5-
OBERER GRINDELWALD	444	CH0057	CEU	46.62	8.1	5-1-8	NW	NW	3705	3030	1392	8.4	6.22	2----
OTEMMA	370	CH0034	CEU	45.95	7.45	5-1-7	SW	SW	3774	3032	2462	12.6	7.07	2----
PALUE	398	CH0100	CEU	46.37	9.98	6-2-9	E	E	3847	3189	2592	5.3	2.54	2----
PANEYROSSE	456	CH0044	CEU	46.27	7.17	6-4-6	N	N	2756	2568	2452	0.3	0.59	2----
PARADIES	412	CH0086	CEU	46.5	9.07	6-0-6	N	NE	3136	2872	2566	2	1.82	2----
PARADISINO (CAMPO)	397	CH0101	CEU	46.421	10.109	6-3-9	NW	W	3043	2945	2833	0.3	0.71	2----
PERS, VADRET	10472		CEU	46.4	9.96	6-1-8	N	NW						---5-
PIZOL	417	CH0081	CEU	46.961	9.39	6-5-6	N	N	2779	2683	2614	0.1	0.39	23456
PLAINE MORTE	4246		CEU	46.38	7.49	0-X-6	N	N	2953	2468	2400	7.4	3.2	-345-
PLATTALVA	420	CH0114	CEU	46.833	8.989	6-5-6	E	E	2941	2740	2601	0.3	0.93	2----
PORCHABELLA	410	CH0088	CEU	46.63	9.88	6-1-6	N	N	3243	2881	2663	1.7	2.2	2----
PRAPIO	453	CH0048	CEU	46.32	7.2	6-5-7	NW	NW	2854	2753	2558	0.2	0.7	2----
PUNTEGLIAS	415	CH0083	CEU	46.791	8.949	6-1-7	SE	S	2984	2602	2348	0.5	2	2----
RAETZLI (PLAINE MORTE)	434	CH0065	CEU	46.39	7.51	6-2-6	N	NW	2967	2725	2470	7.4	3.7	2----
RHONE	473	CH0001	CEU	46.62	8.4	5-1-4	S	S	3596	2958	2209	15.5	10.06	23456
RIED	387	CH0017	CEU	46.13	7.85	5-3-9	NW	NW	4244	3476	2078	7.3	5.33	2----
ROSEG	406	CH0092	CEU	46.378	9.839	5-1-7	N	N	3517	3127	2197	6.7	3.72	2----
ROTFIRN NORD	430	CH0069	CEU	46.662	8.424	6-1-9	E	NE	3254	2726	2086	0.9	2.05	2----
SALEINA	458	CH0042	CEU	45.98	7.07	5-1-8	E	NE	3871	3030	1850	6.5	6.4	2----
SANKT ANNA	432	CH0067	CEU	46.597	8.601	6-3-6	N	N	2913	2720	2630	0.2	0.68	23456
SARDONA	407	CH0091	CEU	46.92	9.27	6-4-6	E	E	3003	2745	2583	0.4	0.64	2----
SCALETTA	1680	CH0115	CEU	46.7	9.95	6-5-0	N	N	3050	2893	2590	0.2	0.78	2----
SCHWARZBACH	4340		CEU	46.597	8.612	X-X-X	NE	NE	2834	2754	2733	0	0.34	-3456
SCHWARZBERG	395	CH0010	CEU	46.02	7.93	6-2-6	NE	NE	3566	3044	2680	5.1	4.11	23456
SEEWJINEN	3333		CEU	46.002	7.95	X-X-X			3228	3004	2719	1.4	1.84	2----
SESVENNA	401	CH0097	CEU	46.713	10.411	6-5-6	NE	N	3065	2930	2748	0.4	0.97	2----
SEX ROUGE	454	CH0047	CEU	46.328	7.215	6-5-6	N	NW	2876	2808	2718	0.3	0.64	23456
SILVRETTA	408	CH0090	CEU	46.85	10.08	6-2-6	NW	W	3071	2782	2474	2.6	3.29	23456
STEIN	448	CH0053	CEU	46.7	8.43	5-2-8	N	N	2974	2725	2491	0.5	0.9	2----
STEINLIMMI	447	CH0054	CEU	46.7	8.4	5-1-7	N	N	3300	2640	2100	2.2	2.7	2----
SURETTA	411	CH0087	CEU	46.52	9.38	6-1-7	NE	NE	3010	2720	2227	1.2	1.6	2----
TIATSCHA	402	CH0096	CEU	46.833	10.087	6-3-4	S	S	3080	2886	2667	1.8	2.05	2----
TIEFEN	433	CH0066	CEU	46.62	8.43	5-1-9	SE	SE	3336	2956	2501	2	2.71	2----
TORTIN GLACIER DE (MONT FORT)	372	CH0032	CEU	46.085	7.308	6-3-6	NW	N	3330	2900	2780	1.1	2	2----
TRIENT	457	CH0043	CEU	46	7.03	5-3-8	N	N	3460	3132	2099	5.7	4.39	2----
TRIFT (GADMEN)	446	CH0055	CEU	46.67	8.37	5-1-8	N	N	3381	2931	1753	14.6	6.42	2----
TSANFLEURON	371	CH0033	CEU	46.32	7.23	6-5-6	E	E	2960	2769	2542	2.5	2.9	23456
TSCHIERVA	405	CH0093	CEU	46.4	9.88	5-1-8	NW	NW	4000	3060	2340	6.8	5	2----
TSCHINGEL	441	CH0060	CEU	46.5	7.85	6-2-7	N	E	3510	2680	2269	6.2	3.8	2----
TSEUDET	364	CH0040	CEU	45.9	7.25	6-1-7	N	N	3714	2919	2524	1.4	2.87	2----
TSIDJIORE NOUVE	376	CH0028	CEU	46	7.45	5-2-8	N	NE	3783	3266	2289	2.7	5	2----
TURTMANN (WEST)	385	CH0019	CEU	46.13	7.69	5-2-8	NW	N	4147	3382	2294	5.1	5.87	2----
UNTERER GRINDELWALD	443	CH0058	CEU	46.577	8.095	5-1-9	N	N	4100	2780	1090	20.6	9	2----
VALLEGGIA	467	CH0117	CEU	46.472	8.506	6-4-8	NE	NE	2785	2519	2430	0.3	1.25	2----
VALSOREY	365	CH0039	CEU	45.9	7.27	5-1-8	NE	NW	3720	3173	2440	1.9	3.8	2----
VERSTANKLA	409	CH0089	CEU	46.843	10.068	6-1-7	NW	NW	2983	2693	2430	0.7	1.84	2----
VORAB	413	CH0085	CEU	46.88	9.17	6-0-6	E	SE	2953	2706	2621	1.2	1.79	2----
WALLENBUR	428	CH0071	CEU	46.707	8.47	6-1-9	E	SE	3126	2570	2263	1.4	2.27	2----
ZINAL	382	CH0022	CEU	46.07	7.63	5-1-9	N	N	4074	3112	2078	13.3	7.29	2----
CL - Chile														
AMARILLO	3905		SAN	-29.303	-70.001	6-3-8	SE	SE	5315	5180	5160	0.2	0.55	-3--6
ECHAURREN NORTE	1344	CL0001B	SAN	-33.578	-70.131	6-4-3	SW	SW	3880	3750	3650	0.3	1.2	-3--6
MOCHO CHOSHUENCO SE	3972		SAN	-39.945	-72.015	4-X-X	SE	SE	2422		1600	5		-345-
CN - China														
PARLUNG NO. 94	3987	CN0094	ASE	29.386	96.976	5-2-8	NW	NW	5635	5358	5075	2.4	2.9	23456
URUMQI GLACIER NO. 1	853	CN0010	ASC	43.118	86.811	5-1-2	NE	NE	4482	4066	3787	1.6	2.075	234-6
URUMQI GLACIER NO. 1 E-BRANCH	1511	CN0001	ASC	43.111	86.811	5-3-8	NE	NE	4252	4021	3787	1	2.075	2345-
URUMQI GLACIER NO. 1 W-BRANCH	1512	CN0002	ASC	43.118	86.804	5-3-8	NE	NE	4482	4121	3883	0.6	1.816	2345-
CO - Colombia														
CONEJERAS	2721	CO0033	TRP	4.815	-75.373	6-3-6	NW	NW	4910	4795	4680	0.1	0.82	23456
RITACUBA BLANCO	2763		TRP	6.494	-72.31	6-3-6	w	w	5330	5029	4820	0.4	1.36	23456
EC - Ecuador														
ANTIZANA15ALPHA	1624	EC1DA15	TRP	-0.47	-78.15	4-7-8	NW	NW	5760	5309	4858	0.3	1.86	23456
ES - Spain														
MALADETA	942	ES9020	CEU	42.649	0.639	6-4-8	NE	NE	3190	3020	2850	0.2	0.76	234-6
FR - France														
ARGENTIERE	354	FR0002	CEU	45.954	6.985	5-1-9	NW	NW	3500	2600	1500	13.5	9	23--6
BLANC	351	FR0031	CEU	44.944	6.387	5-2-8	E	S	4000	3000	2500	7.7	7	2----
BOSSONS	355	FR0004	CEU	45.88	6.865	5-2-8	N	N	4800	3200	1190	10.5	7.2	2----
GEBROULAZ	352	FR0009	CEU	45.298	6.629	5-2-9	N	N	3400	3000	2600	2.8	3	-3---
MER DE GLACE	353	FR0003	CEU	45.88	6.93	5-1-9	N	N	4100	2700	1800	22.7	13	2----
OSSOUE	2867		CEU	42.771	-0.143	5-2-9	E	E	3200	3000	2650	0.5	1.4	23---
SAINT SORLIN	356	FR0015	CEU	45.16	6.16	5-2-9	N	N	3400	2900	2600	3	3	23---
SARENNES	357	FR0029	CEU	45.116	6.129	5-4-8	S	S	2973	2905	2848	0.1	0.6	-3--6
TRE LA TETE	1314	FR0007	CEU	45.794	6.789	5-1-8	S	S	3850	3250	2000	6.6	7.1	23456
GL - Greenland														
FREYA	3350		GRL	74.38	-20.82	5-2-8	N	NW	1250		200	5.3	6	-345-
HOLM LAND OUTLET 1	10461		GRL	80.425	-16.645	3-2-X	NE	NE						2----
HOLM LAND OUTLET 10	10470		GRL	80.229	-17.922	3-3-X	S	S						2----
HOLM LAND OUTLET 2	10462		GRL	80.482	-16.999	3-3-X	N	N						2----
HOLM LAND OUTLET 3	10463		GRL	80.363	-16.237	3-5-X	E	E						2----
HOLM LAND OUTLET 4	10464		GRL	80.307	-16.873	3-2-X	SE	SE						2----
HOLM LAND OUTLET 5	10465		GRL	80.421	-17.366	3-2-X	NW	NW						2----

GLACIER_NAME	WGMS_ID	PSFG_NR	REGION	LAT	LON	CODE	EXP-ACC	EXP-ABL	ELEV-MAX	ELEV-MED	ELEV-MIN	AREA	LEN	DATA_TYPE
HOLM LAND OUTLET 6	10466		GRL	80.231	-16.751	3-3-X	SE	SE						2----
HOLM LAND OUTLET 7	10467		GRL	80.193	-16.962	3-3-X	S	S						2----
HOLM LAND OUTLET 8	10468		GRL	80.317	-17.616	3-3-X	W	W						2----
HOLM LAND OUTLET 9	10469		GRL	80.235	-17.352	3-3-X	SW	SW						2----
MITTIVAKKAT	1629	GL0019	GRL	65.696	-37.803	2-2-3	SW	SW	899		180	15.9	7.5	-34-6
QAANAAQ ICE CAP	4575		GRL	77.516	-69.11	3-3-3								---5-
QASIGIANNGUIT	4566	GL0003	GRL	64.16	-51.35	6-3-8	N	N	1000	860	700	0.7	1.3	-345-
IS - Iceland														
BLAGNIPUJOKULL	3130		ISL	64.72	-19.13	4-X-3	SW	SW	1700		740	51.5	11	2----
BRUARJOKULL	3067	IS2400	ISL	64.67	-16.17	4-3-3	N	N	1800	1260	590	1525	54	-3--6
DYNGJUJOKULL	3068	IS2600	ISL	64.67	-17	4-2-3	N	N	200	1440	720	1060	46	-3---
EYJABAKKAJOKULL	3069	IS2300	ISL	64.65	-15.58	4-2-3	N	NE	1565	1130	690	112	15	-3---
FALLJOKULL	3071	IS1021	ISL	63.98	-16.75	4-3-3	W	W	2000		140	8	8	2----
FLAAJOKULL	3078	IS1930A	ISL	64.363	-15.653	4-3-2	SE	SE	1520		50	180	29	2----
FLAAJOKULL E 148	3076	IS1930C	ISL	64.363	-15.653	4-3-2	SE	SE	1520		50	180	29	2----
GEITLANDSJOKULL	3128		ISL	64.598	-20.601	4-X-3	W	W	1420		800		8	2----
HAGAFELLSJOKULL E	3081	IS0306	ISL	64.49	-20.26	4-3-3	SW	SW	1420		440	111	19	2----
HAGAFELLSJOKULL W	3082	IS0204	ISL	64.49	-20.41	4-3-3	SW	SW	1420		450	150	18	2----
HEINABERGSJOKULL	3085		ISL	64.315	-15.808	4-2-4	E	E			60			2----
HEINABERGSJOKULL H	3084	IS1829B	ISL	64.315	-15.808	4-2-4	E	E			70	100.6	22.7	2----
HOFSJOKULL E	3088	IS0510B	ISL	64.8	-18.58	4-3-3	E	E	1790	1175	670	213.1	17.3	-3--6
HOFSJOKULL N	3089	IS0510A	ISL	64.95	-18.92	4-3-3	N	N	1720	1250	875	73.7	15.3	-3---
HOFSJOKULL SW	3090	IS0510C	ISL	64.72	-19.05	4-3-3	SW	SW	1775	1360	750	48.8	10.7	-3--6
HYRNINGSJOKULL	3092	IS0100	ISL	64.81	-23.73	4-3-3	E	E	1445		700	2	2	2----
JOKULHALS	3093	IS0201	ISL	64.82	-23.75	4-3-3	E	E	1450	1000	820	11	3	2----
KALDALONSJOKULL	3095	IS0102	ISL	66.12	-22.29	4-3-3	SW	SW	900		140	37	6	2----
KOLDUKVISLARJ.	3096	IS2700	ISL	64.58	-17.83	4-3-3	NW	NW	2000	1420	900	300	27	-3---
LAMBAHRAUNSJOKULL	3099	IS0409	ISL	64.97	-18.86	4-3-0	N	N						2----
LANGJOKULL ICE CAP	3660		ISL	64.67	-20.1	3-0-0						871		-3--6
LEIRUFJARDARJOKULL	3102	IS0200	ISL	66.19	-22.44	4-3-3	NW	NW	925		140	27	6	2----
MORSARJOKULL	3104	IS0318	ISL	64.09	-16.94	4-3-3	SW	SW	1380		170	28.9	10.8	2----
MULAJOKULL S	3105	IS0311A	ISL	64.67	-18.66	4-3-2	SE	SE	1790		610	70	20	2----
MULAJOKULL W	3106	IS0311B	ISL	64.67	-18.72	4-3-1	S	SE	1800	1300	600	100	19	2----
NAUTHAGAJOKULL	3107	IS0210	ISL	64.65	-18.76	4-3-3	S	S	1780		630	25	18	2----
REYKJAFJARDARJOKULL	3109	IS0300	ISL	66.2	-22.18	4-3-3	NE	NE	925		100	22	7	2----
RJUPNABREKKUJOKULL	3136		ISL	64.72	-17.56	4-X-3	NW	NW	1940		1060		7	2----
SATUJOKULL	3110	IS0530	ISL	64.92	-18.83	4-3-3	N	N	1790		860	90.6	20	2----
SIDUJOKULL E M 177	3112	IS0015B	ISL	64.11	-17.74	4-3-2	SW	S	1720		590	380	40	2----
SKAFTAFELLSJOKULL	3113	IS0419	ISL	64.02	-16.9	4-2-3	SW	SW	1900		95	90.5	19.3	2----
SKEIDARARJOKULL E1	3116	IS0117A	ISL	64.03	-17.09	4-3-2	S	S	1725		100	850	50	2----
SKEIDARARJOKULL E2	3117	IS0117B	ISL	64.01	-17.11	4-3-2	S	S	1725		100	850	50	2----
SKEIDARARJOKULL E3	3118	IS0117C	ISL	64.01	-17.14	4-3-2	S	S	1725		100	850	50	2----
SLETTJOKULL	3133		ISL	63.77	-19.2	4-X-3	NW	NW	1380		640	100	11	2----
SOLHEIMAJOKULL W	3122	IS0113A	ISL	63.53	-19.37	4-3-3	SW	SW	1500		110	44	15	2----
SVINAFELLSJOKULL	3124	IS0520A	ISL	63.99	-16.88	4-2-3	W	SW	2119		100	32.2	12	2----
TUNGNAARJOKULL	3126	IS2214	ISL	64.32	-18.07	4-3-3	SW	W	1680	1220	690	345	39	23---
IT - Italy														
AGNELLO MER.	684	IT0029	CEU	45.147	6.9	6-4-0	NE	NE	3200	3010	3020	0.5	1.45	2----
ALTA (VEDRETTA) / HOHENF.	632	IT0730	CEU	46.458	10.68	5-3-8	NE	N	3350	3059	2690	1.8	2	2----
AMOLA	638	IT0644	CEU	46.198	10.72	6-3-0	E	E	3120	2785	2510	0.9	1.8	2----
ANTELAO INFERIORE (OCC.)	642	IT0967	CEU	46.45	12.27	6-4-0	N	N	2800	2472	2340	0.2	0.85	2----
ANTELAO SUP.	643	IT0966	CEU	46.45	12.27	6-3-0	N	NE	3130	2465	2510	0.4	1.3	2----
AOUILLE	1239	IT0138	CEU	45.525	7.151	6-4-X			3350		3080	0.2	0.8	2----
ARGUEREY MER.	1253	IT0200	CEU	45.703	6.842	X-X-X			2850		2700	0.2	0.6	2----
ARGUEREY SETT.	1254	IT0201	CEU	45.705	6.834	6-5-X			2900		2580	0.5	0.9	2----
BARBADORSO DI DENTRO / BAERENBARTF. INNERER	658	IT0778	CEU	46.808	10.716	5-3-8	N	N	3550	2798	2690	1.8	2.1	2----
BASEI	611	IT0064	CEU	45.477	7.117	6-0-0	NE	NE	3320		2950	0.4	0.8	2----
BASSA DELL' ORTLES / ORTLERF. NIEDERER	1128	IT0769	CEU	46.508	10.512	5-1-8			3560		2230	2.8	3	2----
BELVEDERE (MACUGNAGA)	618	IT0325	CEU	45.95	7.911	5-2-5	NE	NE	4520		1780	5.6	6.05	2----
BERTA	1295	IT0036	CEU	45.232	7.139	X-X-X			3200		2950	0.6	0.2	2----
BESSANESE	1297	IT0040	CEU	45.3	7.12	5-3-2	SE	SE	3210		2585	1	2.55	2----
BORS	2453	IT0311	CEU	45.889	7.871	X-X-X								2----
BREUIL SETT.	1256	IT0203	CEU	45.725	6.816	X-X-X			3000		2900	0.6	0.8	2----
BROGLIO	2375	IT0133	CEU	45.484	7.227	X-X-X								2----
CALDERONE	1107	IT1006	CEU	42.471	13.567	6-4-0	NE	NE	2830	2730	2650	0	0.3	23-56
CAMPO SETT.	1106	IT0997	CEU	46.431	10.108	6-4-6	W	W	3228	3022	2848	0.3	0.762	-3--6
CAPRA	1304	IT0061	CEU	45.447	7.118	6-4-X			2790		2480	0.2	0.9	2----
CARESER	635	IT0701	CEU	46.451	10.709	6-3-8	S	S	3268	3077	2949	1	0.95	-3456
CARRO OCCIDENT.	2358	IT0060	CEU	45.433	7.117	X-X-X								2----
CASPOGGIO	628	IT0435	CEU	46.338	9.914	6-4-8	NW	NW	2985	2800	2725	0.8	1.1	2----
CASSANDRA OR.	1185	IT0411	CEU	46.262	9.756	5-2-X			3100		2915	0.4	1.8	2----
CEDEC	1165	IT0503	CEU	46.449	10.603	5-2-X			3780		2710	2.5	3	2----
CEVEDALE FORCOLA / FUERKELEF.	663	IT0731	CEU	46.45	10.652	5-3-8	E	NE	3750	3105	2670	2.5	3.5	2----
CEVEDALE PRINCIPALE / ZUFALLF.	662	IT0732	CEU	46.458	10.627	5-3-8	E	E	3700	3078	2650	3.2	3.7	2----
CHATEAU BLANC	1251	IT0181	CEU	45.654	7.024	X-X-X			3250		2710	2.2	2.4	2----
CIAMARELLA	1298	IT0043	CEU	45.326	7.133	6-4-X			3400		3095	0.7	0.9	2----
CIARDONEY	1264	IT0081	CEU	45.518	7.39	6-3-9	NE	E	3130		2850	0.6	1.7	234--
COUPE DE MONEY	1271	IT0109	CEU	45.53	7.38	6-4-X			3600		2725	1.5	2	2----
CRODA ROSSA / ROTWANDF.	654	IT0828	CEU	46.733	10.984	6-3-8	N	N	3205	3002	2790	0.2	1	2----
DISGRAZIA	2503	IT0419	CEU	46.283	9.744	X-X-X			3000		2620			2----
DOSDE OR.	625	IT0473	CEU	46.392	10.219	6-4-6	N	N	3200	2850	2580	0.9	1.7	2----
DOSEGU	668	IT0512	CEU	46.374	10.548	5-2-6	SW	SW	3670	3260	2862	3.3	2.8	2----
DZASSET	2372	IT0113	CEU	45.538	7.274	X-X-X			3750		2950			2----
ENTRELOR SETT.	2377	IT0140	CEU	45.532	7.152	X-X-X								2----
FOND OCCID.	2380	IT0146	CEU	45.476	7.074	X-X-X			3000		2710			2----
FOND OR.	1243	IT0145	CEU	45.472	7.083	X-X-X			3300		2720	1.1	2.1	2----
FONTANA BIANCA / WEISSBRUNNF.	1507	IT0713	CEU	46.484	10.771	6-4-0	E	E	3350	3160	2850	0.4	1.151	23456
FORNI CENTRALE	670	IT0507	CEU	46.4	10.586	5-2-9	N	NW	3678	3150	2510	20	5	2----
FORNI OCCIDENTALE	10420		CEU	46.401	10.613	5-2-9	NE	NE						2----
FORNI ORIENTALE	10421		CEU	46.389	10.571	5-2-9	NW	NW						2----
FRANE (VEDR. DELLE) / STEINSCHLAGF.	2624	IT0812	CEU	46.779	10.74	X-X-X								2----
GLIAIRETTA VAUDET	1248	IT0168	CEU	45.507	7.019	5-X-X			3300		2700	3.6	3.6	2----
GOLETTA	683	IT0148	CEU	45.497	7.055	5-2-0	N	N	3290	3055	2760	3	2.4	2----

GLACIER_NAME	WGMS_ID	PSFG_NR	REGION	LAT	LON	CODE	EXP-ACC	EXP-ABL	ELEV-MAX	ELEV-MED	ELEV-MIN	AREA	LEN	DATA_TYPE
GRAMES ORIENT. + CENTR. / GRAMSENF. OESTL. + ZENTR.	2599	IT0727	CEU	46.469	10.716	X-X-X								2----
GRAN NEYRON	1283	IT0127	CEU	45.55	7.264	5-2-X			3340		2340	1.1	1.7	2----
GRAN PARADISO	1235	IT0130	CEU	45.515	7.254	5-3-X			3980		2970	0.7	1.9	2----
GRAN PILASTRO (GHIAC. DEL) / GLIEDERF.	652	IT0893	CEU	46.973	11.717	5-3-8	SW	W	3370	2935	2500	2.6	3.7	2----
GRAN VEDRETTA OCC. / HOCHF.	2634	IT0884	CEU	46.978	11.711	X-X-X								2----
GRAN VEDRETTA OR. / GRIESSF.	2633	IT0883	CEU	46.981	11.719	X-X-X								2----
GRAN ZEBRU (CENTRALE)	1164	IT0502	CEU	46.47	10.571	X-X-X			3400		2930	1	1.8	2----
GRAND CROUX CENTR.	1273	IT0111	CEU	45.519	7.309	X-X-X			3300		2560	2	2.1	2----
GRAND ETRET	1238	IT0134	CEU	45.476	7.219	5-2-X			3100		2700	0.5	1.3	2----
GRUETTA ORIENT.	2418	IT0232	CEU	45.897	7.027	X-X-X								2----
HOHSAND SETT. (SABBIONE SETT.)	631	IT0357	CEU	46.4	8.3	6-2-0	NE	E	3180	2860	2550	2	2.87	2----
INDREN OCC.	1209	IT0306	CEU	45.895	7.856	5-3-X			4100		3050	1.7	2.5	2----
LA MARE (VEDRETTA DE)	636	IT0699	CEU	46.43	10.63	5-2-0	NE	NE	3769	3260	2750	2	3.5	234--
LAGAUN (Vedretta di) / LAGAUN FERNER	6823	IT0805	CEU	46.733	10.738	X-X-X								2----
LANA (VEDR. DI) / AEUSSERES LAHNER KEES	650	IT0913	CEU	47.068	12.212	5-2-9	NW	NW	3480	2720	2310	1.7	2.9	2----
LAUSON	1275	IT0116	CEU	45.565	7.288	6-4-0	N	N	3370	3100	2965	0.5	1.05	2----
LAVACCIU	1285	IT0129	CEU	45.521	7.254	5-2-X			3770		2810	1.8	2.6	2----
LAVASSEY	1242	IT0144	CEU	45.478	7.106	6-4-X			3130		2700	1.5	1.9	2----
LOBBIA	1150	IT0637	CEU	46.16	10.581	5-3-0	N	N	3438	2968	2620	5.4	1.8	2----
LUNGA (VEDRETTA) / LANGENF.	661	IT0733	CEU	46.468	10.619	5-2-9	NE	E	3371	3143	2700	1.6	2.44	23456
LUPO	1138	IT0543	CEU	46.076	9.99	6-4-6	N	NW	2760	2565	2435	0.2	0.7	23--6
LYS	620	IT0304	CEU	45.9	7.83	5-1-5	SW	SW	4530	3732	2355	11.8	5.6	2----
MADACCIO (VEDR. DEL) / MADATSCHF.	1129	IT0771	CEU	46.508	10.48	5-2-X			3450		2280	3.2	2.2	2----
MALAVALLE (VEDR. DI) / UEBELTALF.	672	IT0875	CEU	46.948	11.185	5-1-5	E	E	3470	3007	2570	6	4	2345-
MARMOLADA CENTR.	676	IT0941	CEU	46.437	11.867	6-0-6	N	N	3340	2825	2720	2.6	1.5	2----
MAROVIN	2547	IT0541	CEU	46.079	10.004	X-X-X			2450		2060			2----
MARTELOT	1301	IT0049	CEU	45.379	7.171	6-5-X			2860		2450	0.2	0.8	2----
MAZIA (VEDR. DI) / MATSCHERF.	2620	IT0788	CEU	46.783	10.719	X-X-X								2----
MONCIAIR	1237	IT0132	CEU	45.492	7.236	6-5-X			3230		2850	0.5	0.7	2----
MONCORVE	1236	IT0131	CEU	45.5	7.25	6-2-2	NW	NW	3642	3158	2900	2.2	1.5	2----
MONEY	1272	IT0110	CEU	45.525	7.336	5-2-X			3600		2515	1.9	2.6	2----
MONTANDEYNE	1284	IT0128	CEU	45.537	7.26	6-4-X			3400		3100	1.2	1.3	2----
MONTARSO (VEDR. DI) / FEUERSTEINF.	2631	IT0880	CEU	46.967	11.252	X-X-X								2----
NARDIS OCC.	639	IT0640	CEU	46.212	10.659	5-3-0	SE	SE	3500	3160	2790	1.7	2.55	2----
NEL CENTRALE	1303	IT0057	CEU	45.419	7.167	6-5-X			3200		2600	1.1	1.5	2----
NEVES OR. (GHIAC. DI) / NOEFESF. OESTL.	651	IT0902	CEU	46.98	11.8	6-3-8	S	S	3300	2990	2655	2.3	2.2	2----
NOASCHETTA OCCID.	2359	IT0072A	CEU	45.504	7.278	X-X-X								2----
PALON DELLA MARE LOBO CENTR.	2533	IT0506B	CEU	46.411	10.603	X-X-X			3704					2----
PALON DELLA MARE LOBO OR.	2534	IT0506C	CEU	46.411	10.603	X-X-X								2----
PENDENTE (VEDR.) / HANGENDERF.	675	IT0876	CEU	46.966	11.225	5-2-0	S	S	2950	2780	2625	0.9	1.3	2345-
PERCIA	1240	IT0139	CEU	45.471	7.201	6-4-X			3300		3000	0.3	0.8	2----
PIODE	619	IT0312	CEU	45.908	7.878	5-2-0	SE	SE	4436	3120	3470	2.5	2.65	2----
PIZZO FERRE	1181	IT0365	CEU	46.466	9.28	5-3-X			2990		2700	0.9	1.8	2----
PIZZO SCALINO	1187	IT0443	CEU	46.28	9.98	6-3-6	N	N	3100	2920	2585	1.9	2.1	2----
PLANOL (VEDR. DI) / PLANAILF.	2619	IT0784	CEU	46.792	10.669	X-X-X								2----
PREDAROSSA	1182	IT0408	CEU	46.256	9.74	5-3-X			3400		2625	0.9	2.5	2----
QUAIRA BIANCA (VEDR. DELLA) / WEISSKARF.	686	IT0889	CEU	46.547	10.859	5-2-0	SW	SW	3509	3132	2605	1.4	2.8	2----
RIES OCC. (VEDR. DI) / RIESERF. WESTL.	645	IT0930	CEU	46.903	12.096	6-3-6	N	N	3220	3000	2750	1.7	2.1	-345-
ROCCIA VIVA	2364	IT0078	CEU	45.514	7.333	X-X-X								2----
ROSIM (VEDR. DI) / ROSIMF.	610	IT0754	CEU	46.525	10.64	6-3-0	NW	W	3405	3215	2940	0.8	1.5	2----
ROSSO DESTRO	648	IT0920	CEU	47.03	12.2	5-3-6	W	W	3285	2838	2520	0.9	1.7	2----
RUTOR	612	IT0189	CEU	45.5	7.002	5-2-0	N	NW	3460	2998	2480	9.5	4.8	2----
SALDURA MER. (VEDR. DI) / SALDUR F. SUEDL.	1131	IT0794	CEU	46.742	10.728	6-4-X			3350		2850	0.4	1.3	2----
SCERSCEN INFERIORE	1186	IT0432	CEU	46.355	9.852	5-2-X			3400		2645	7	4.5	2----
SEA	1299	IT0046	CEU	45.336	7.141	5-3-X			3020		2710	0.6	1.9	2----
SENGIE SETT.	1267	IT0102	CEU	45.536	7.402	X-X-X			3280		2700	1	1	2----
SERANA (VEDR.) / SCHRANF.	634	IT0728	CEU	46.467	10.701	6-4-6	N	N	3335	3085	2810	1.2	1.6	2----
SESIA	1210	IT0314	CEU	45.916	7.896	X-X-X			4000		2700	1.1	2.8	2----
SFORZELLINA	667	IT0516	CEU	46.348	10.513	6-4-8	NW	NW	3120	2925	2795	0.4	0.7	2----
SISSONE	2506	IT0422	CEU	46.297	9.719	X-X-X			3100		2625			2----
SOCHES TSANTELEINA	1244	IT0147	CEU	45.485	7.068	6-4-X			3450		2720	3.4	3.5	2----
SOLDA (VEDRETTA DI) / SULDENF.	660	IT0762	CEU	46.494	10.566	5-2-7	NE	NE	3900	2908	2410	6.5	4.2	2----
SURETTA MERID.	2488	IT0371	CEU	46.506	9.361	6-4-7	S	S	2908	2774	2688	0.1	0.462	23--6
TESSA (VEDR. DI) / TEXELF.	653	IT0829	CEU	46.73	10.98	6-3-2	N	NW	3300	2990	2698	0.8	1.8	2----
TIMORION	1282	IT0126	CEU	45.558	7.282	6-4-8	NW	NW	3485	3275	3150	0.4	0.85	2----
TORRENT	2384	IT0155	CEU	45.579	7.089	X-X-X			3100		2660			2----
TRAFOI (VEDR. DI) / TRAFOIER F.	2617	IT0770	CEU	46.503	10.497	X-X-X								2----
TRAJO	1278	IT0121	CEU	45.597	7.272	5-3-X			3500		2870	2.2	2.6	2----
TRIBOLAZIONE	1274	IT0112	CEU	45.521	7.284	6-4-X			3870		2785	5.8	2.1	2----
ULTIMA (VEDR.) / ULTENMARKTF.	633	IT0729	CEU	46.465	10.69	6-4-8	N	N	3370	3115	2780	0.5	1.2	2----
VALEILLE	1268	IT0103	CEU	45.52	7.379	5-3-X			3380		2700	1.6	2.5	2----
VALLELUNGA (VEDR. DI) / LANGTAUFERERF.	659	IT0777	CEU	46.817	10.731	5-1-8	NW	NW	3730	3138	2395	8.6	3.9	2----
VENEROCOLO	665	IT0581	CEU	46.164	10.506	5-3-9	NW	N	3280	2810	2570	1.5	2.2	2----
VENTINA	629	IT0416	CEU	46.27	9.77	5-3-6	NE	N	3500	2790	2230	2.4	3.7	2----
JP - Japan														
HAMAGURI YUKI	897	JP0001	ASN	36.6	137.62	7-3-0	NE	NE	2720		2690	0	0.07	-3---
KG - Kyrgyzstan														
ABRAMOV	732	KG4101	ASC	39.62	71.56	5-2-8	N	N	4918	4231	3600	23.9	7.8	23456
BATYSH SOOK/SYEK ZAPADNIY	781	KG5082	ASC	41.79	77.75	5-3-8	N	N	4471	4217	3944	1	2.12	2345-
BORDU	829	KG5110	ASC	41.815	78.17	5-2-8	NW	NW	4730	4231	3880	4.9	4.61	-34-6
GLACIER NO. 354 (AKSHIYRAK)	3889		ASC	41.799	78.151	5-2-8	NW	NW	4679	4168	3759	6.4	4.4	23456
GLACIER NO. 599 (KJUNGEI ALA-TOO)	10402		ASC	42.793	76.867	5-3-8	NW	W	4300	4015	3738	1.5	2.1	-345-
GOLUBIN	753	KG5060	ASC	42.46	74.495	5-3-8	NW	NW	4350	3925	3325	5.5	4.7	23456
KARA-BATKAK	813	KG5080	ASC	42.14	78.27	5-3-8	NW	N	4770	3922	3360	2.5	3.21	234-6
SARY TOR (NO.356)	805	KG5106	ASC	41.83	78.174	5-3-8	W	NW	4760	4288	3930	2.6	4.05	234-6
KZ - Kazakhstan														
TS.TUYUKSUYSKIY	817	KZ5075	ASC	43.05	77.08	5-3-6	N	N	4219	3824	3491	2.3	2.522	23456
NO - Norway														
AALFOTBREEN	317	NO36204	SCA	61.75	5.65	4-3-6	NE	NE	1368	1230	890	4	2.9	-34-6

GLACIER_NAME	WGMS_ID	PSFG_NR	REGION	LAT	LON	CODE	EXP-ACC	EXP-ABL	ELEV-MAX	ELEV-MED	ELEV-MIN	AREA	LEN	DATA_TYPE
AUSTDALSBREEN	321	NO37323	SCA	61.815	7.352	4-2-4	SE	SE	1747	1495	1200	10.6	5.7	-34-6
AUSTERDALSBREEN	288	NO31220	SCA	61.62	6.93	4-3-8	SE	SE	1920	1600	390	19.8	8.5	2----
AUSTRE OKSTINDBREEN	3342		SCA	66.019	14.294	X-X-X	N	E	1710		750		6	2----
BLOMSTOELSKARDSBREEN	3339		SCA	59.949	6.332	X-X-X	SW	SW	1632	1505	1011	22.5		234--
BOEVERBREEN	2298	NO0548	SCA	61.55	8.088	X-X-X								2----
BONDHUSBREA	318	NO20408	SCA	60.03	6.33	4-3-8	NW	NW	1660	1450	477	17.6	7.8	2----
BOTNABREA	2292	NO20515	SCA	60.192	6.427	4-3-8	W	W						2----
BRENNDALSBREEN	2293	NO37109	SCA	61.685	6.933	4-3-8	W	W						2----
BUERBREEN	315	NO21307	SCA	60.033	6.402	4-3-8	E	NE	1640		620	15.5	7.5	2----
CORNELIUSSENBREEN	3341		SCA	66.003	14.37	5-3-8	NE	E	1620		1080		2.3	2----
ENGABREEN	298	NO67011	SCA	66.65	13.85	4-3-8	N	NW	1574	1220	111	36.8	11.5	234-6
FAABERGSTOELSBREEN	289	NO31015	SCA	61.72	7.23	4-3-8	E	E	1810	1540	760	20.2	7	2----
GRAAFJELLSBREA	1320	NO2051	SCA	60.083	6.399	4-3-8	NW	NW	1647	1500	1049	8	5	2----
GRAASUBREEN	299	NO0547	SCA	61.657	8.6	6-7-6	NE	E	2284	2085	1833	2.1	2.3	-34-6
HANSEBREEN	322	NO36206	SCA	61.75	5.68	X-X-X	NE	N	1310	1150	927	2.8	2.5	-34-6
HAUGABREEN	4568	NO2298	SCA	61.687	6.716	X-X-X						9.9		2----
HELLSTUGUBREEN	300	NO0511	SCA	61.56	8.44	5-1-8	N	N	2229	1900	1482	2.9	3.4	234-6
JUVFONNE	3661		SCA	61.677	8.351	X-X-X			1986	1886	1841	0.2	0.335	2----
KOPPANGSBREEN	2309		SCA	69.689	20.147	X-X-X								2----
LANGFJORDJOEKELEN	323	NO85008	SCA	70.128	21.735	4-3-8	SE	E	1050	850	302	3.2	4.2	234-6
LEIRBREEN	301	NO0548	SCA	61.57	8.1	X-X-X	NW	NW	2070		1530	4.7	3.8	2----
MAARAADALSBREEN	4567	NO2430	SCA	61.933	7.422	X-X-X								2----
MIDTDALSBREEN	2295	NO4302	SCA	60.57	7.47	4-3-8	NE	NE	1862	1730	1380	6.8		2----
MOESEVASSBREEN	10473		SCA	59.99	6.269	X-X-X			1617		873	15.5		-34--
NIGARDSBREEN	290	NO31014	SCA	61.72	7.13	4-3-8	SE	SE	1952	1627	330	46.6	9.6	234-6
REMBESDALSKAAKA	2296	NO22303	SCA	60.539	7.368	4-3-8	W	W	1854	1735	1066	17.3	8.1	234-6
RUNDVASSBREEN	2670		SCA	67.299	16.057	4-X-X	NE	N	1525	1265	853	10.8		234-6
SKJELAATINDBREEN	10424	NO1272	SCA	66.727	14.449	X-X-X	E	E						2----
STEGHOLTBREEN	313	NO31021	SCA	61.801	7.314	4-3-8	S	S	1900	1480	880	12.5	7.7	2----
STEINDALSBREEN	2310		SCA	69.393	19.902	X-X-X	E	E						2----
STORBREEN	302	NO0541	SCA	61.57	8.13	5-2-6	NE	NE	2102	1775	1400	5.1	2.93	234-6
STORJUVBREEN	2308		SCA	61.647	8.292	X-X-X	N	N						2----
STORSTEINSFJELLBREEN	1329	NO7381	SCA	68.22	17.92	5-2-8	E	SE	1850	1380	969	6	5.3	2----
STYGGEBREAN	4504	NO2608	SCA	61.645	8.341	5-1-X			2415	2034	1665	4.9	4	2----
STYGGEDALSBREEN	303	NO30720	SCA	61.473	7.885	5-2-6	N	N	2240	1650	1270	2	3.2	2----
SVELGJABREEN	3343		SCA	59.945	6.283	X-X-X	SW	SW	1632	1375	829	22.3		234--
SYDBREEN	3351		SCA	69.45	19.91	5-2-8	NE	E						2----
TROLLBERGDALSBREEN	316	NO68507	SCA	66.716	14.441	5-3-8	SE	SE	1300	1050	907	1.7	2.1	2----
TROLLKYRKJEBREEN	3606		SCA	62.288	7.459	X-X-X	NE	NE						2----
TUFTEBREEN	3352		SCA	61.67	7.14	4-3-8	E	SE						2----
VETLE SUPPHELLEBREEN	3607		SCA	61.522	6.836	X-X-X	SE	S						2----
NP - Nepal														
MERA	3996		ASE	27.72	86.885	5-0-6	NE	N	6420	5615	4940	5.1	4.55	-3--6
POKALDE	3997		ASE	27.9	86.8	5-4-8	N	N	5660	5580	5430	0.1	0.47	-3---
RIKHA SAMBA	1516	NP0012	ASE	28.82	83.49	5-3-8	S	SE	6515	5826	5416	5.3	5.4	-34-6
WEST CHANGRI NUP	10401		ASE	27.982	86.777	5-4-8	NE	SE	5690	5507	5330	0.9	1.37	-3--6
YALA	912	NP0004	ASE	28.25	85.62	6-3-6	SW	SW	5661	5372	5168	1.6	1.4	23456
NZ - New Zealand														
ADAMS	2923		NZL	-43.32	170.72	5-1-8	W	N	2470	1880	1295	4.3	6.6	2----
ALMER/SALISBURY	1548		NZL	-43.47	170.22	5-1-8	W	SW	2390	1865	1340	3.3	2.98	2----
ANDY	1590		NZL	-44.43	168.37	4-1-8	N	N	2190	1750	840	10.7	7.1	2----
ASHBURTON	1570		NZL	-43.37	170.97	5-3-9	S	S	2590	2085	1575	1.7	2.5	2----
BALFOUR	1604		NZL	-43.55	170.12	5-3-9	W	W	3305	1525	730	7.2	9.9	2----
BARLOW	1608		NZL	-43.3	170.63	6-2-9	W	W	2440	1705	1220	3.8	3.8	2----
BARRIER	2281		NZL	-44.42	168.36	6-2-8	S	W	2285	1860	1370	2.5	2.85	2----
BLAIR	1551		NZL	-43.95	169.72	6-7-8	SE	SE	2240	2015	1790	0.4	0.63	2----
BONAR	1587		NZL	-44.4	168.72	6-2-4	SW	W	3025	2090	1160	15.5	7.9	2----
BREWSTER	1597		NZL	-44.07	169.43	6-3-8	SW	SW	2399	2023	1676	2	2.69	23--6
BURTON	1606		NZL	-43.45	170.32	5-2-9	N	NW	3115	2120	1130	6.2	6.35	2----
BUTLER	1544		NZL	-43.25	170.93	6-2-6	E	SE	2040	1860	1680	0.8	0.66	2----
CAMERON	1565		NZL	-43.33	171	6-2-9	SW	SE	2470	1980	1380	2	3.1	2----
CROW	1564		NZL	-42.92	171.5	6-3-6	SE	S	2210	1940	1675	0.5	1.2	2----
DAINTY	2287		NZL	-43.232	170.887	6-4-8	W	W	2330	2040	1750	0.4	1.45	2----
DART	898		NZL	-44.45	168.6	5-3-9	SW	SW	2470	1770	1070	9.7	7.6	2----
DECHEN	10425		NZL	-43.8	169.765	X-X-X								2----
DISPUTE	2286		NZL	-44.14	168.96	6-4-8	E	E	1720	1660	1600	0.3	0.85	2----
DONALD	2284		NZL	-44.24	168.87	6-2-8	SW	NW	2440	1980	1525	0.6	2.85	2----
DONNE	1585		NZL	-44.58	168.02	6-3-8	E	SE	2745	1615	1220	2	3.6	2----
DOUGLAS (KAR.)	1601		NZL	-43.68	170	5-2-4	SW	W	3160	1980	960	9.6	7.4	2----
EVANS	1611		NZL	-43.2	170.92	5-2-9	SW	W	2455	1860	1250	3.7	2.9	2----
FITZGERALD (GOD)	2278		NZL	-43.47	170.57	6-3-8	W	SW	2530	2165	1660	1.3	1.8	2----
FORGOTTEN COL	2282		NZL	-44.44	168.36	5-2-9	S	W	2225	1800	1675	0.6	1.25	2----
FOX	1536		NZL	-43.53	170.15	5-2-8	NW	W	3500	1900	305	34.7	12.58	2----
FRANZ JOSEF	899		NZL	-43.5	170.22	5-2-8	NW	NW	2955	1690	425	33.1	10.469	2----
FRESHFIELD	2966		NZL	-43.58	170.19	5-2-9	E	E	2285	2010	1525	0.6	1.2	2----
GLENMARY	1550		NZL	-43.993	169.884	6-4-8	S	S	2350	2180	2010	0.7	1.19	2----
GODLEY	1581		NZL	-43.43	170.57	5-2-4	S	SW	2440	1785	1130	13.8	8.6	2----
GUNN	1560		NZL	-44.76	168.09	6-3-8	SE	E	1860	1615	1495	0.8	1.25	2----
HORACE WALKER	1600		NZL	-43.67	169.97	5-3-8	W	SW	2455	2075	945	5.7	6.6	2----
IVORY	900		NZL	-43.133	170.926	6-4-4	S	S	1730	1510	1390	0.9	1.35	2----
KAHUTEA	1569		NZL	-43.02	171.38	6-3-8	S	SW	2300	2025	1740	0.8	1.6	2----
KEA	1545		NZL	-43.18	170.8	6-4-8	S	S	2030	1840	1650	1	0.95	2----
LA PEROUSE	1605		NZL	-43.57	170.12	5-3-9	NW	W	3320	1980	855	9.7	11.15	2----
LAMBERT	1612		NZL	-43.3	170.75	2-2-4	E	NW	2425	1810	1190	10.1	5.15	2----
LAWRENCE	2275		NZL	-43.32	171	5-2-9	W	E	2375	1860	1480	1.5	2.25	2----
LEEB-LORNTY	2288		NZL	-43.22	170.9	6-2-8	W	W	2635	2135	1190	2.5	3.3	2----
LYELL	1567		NZL	-43.28	170.83	5-2-9	S	E	2440	1720	1005	10.8	6.2	2----
MACAULAY	2280		NZL	-43.49	170.604	6-2-8	SE	E	2375	2040	1650	0.9	1.45	2----
MARION	1591		NZL	-44.47	168.48	6-2-8	W	N	2470	1905	1340	4.1	5.1	2----
MARMADUKE DIXON	1541		NZL	-42.98	171.38	6-4-8	E	SE	2100	1858	1615	0.8	1.7	2----
METALILLE	2998		NZL	-43.75	170.06	6-3-8	N	N	2375	2180	1800		2.3	2----
MUELLER	1575		NZL	-43.75	170.02	5-2-4	SE	SE	2895	1330	760	13.9	13.65	2----
MURCHISON	1578		NZL	-43.52	170.4	5-2-9	E	SW	3155	2080	1005	31.4	16.45	2----
PARK PASS	1559		NZL	-44.591	168.242	6-3-8	S	S	2200	1850	1500	2.6	2.63	2----

GLACIER_NAME	WGMS_ID	PSFG_NR	REGION	LAT	LON	CODE	EXP-ACC	EXP-ABL	ELEV-MAX	ELEV-MED	ELEV-MIN	AREA	LEN	DATA_TYPE
RAMSAY	1568		NZL	-43.22	170.93	5-3-4	SW	S	2315	1650	990	11.6	8.6	2----
REISCHEK	1566		NZL	-43.32	171	6-3-8	SW	SW	2440	2075	1615	1.7	2.65	2----
RICHARDSON	1574		NZL	-43.8	169.95	5-3-9	W	SW	2225	1525	1080	4.2	5.8	2----
ROLLESTON	1538		NZL	-42.89	171.526	6-4-6	SE	SE	1900	1795	1727	0.1	0.36	-3-5-
SALE	1614		NZL	-43.22	170.95	6-3-8	E	SE	2134	1753	1372	0.9	1.8	2----
SEPARATION	2279		NZL	-43.48	170.58	5-2-9	S	SW	2560	2025	1495	1.9	2.65	2----
SIEGE	1616		NZL	-43.27	170.53	5-3-8	SE	SE	2130	1750	1435	1.2	3.19	2----
SLADDEN	3611		NZL	-43.758	170.02	X-X-X								2----
SNOW WHITE	1588		NZL	-44.45	168.58	5-3-8	N	E	2425	1950	1220	5.2	5.5	2----
SNOWBALL	1589		NZL	-44.45	168.52	6-3-8	NW	W	2345	1905	1465	3.2	2.7	2----
SOUTH CAMERON	3019		NZL	-43.35	170.99	6-3-8	NE	NE	2620	2285	1980		1.2	2----
SPENCER	1607		NZL	-43.488	170.292	5-2-9	W	N	3045	1900	760	10.5	7.75	2----
ST. JAMES	2274		NZL	-43.28	170.89	6-2-9	NE	E	2377	1645	1035	0.9	2.8	2----
STOCKING (TEWAEWAE)	3023		NZL	-43.68	170.07	6-3-8	SE	SE						2----
STRAUCHON	1599		NZL	-43.62	170.08	5-3-4	W	SW	2530	1745	960	3.6	5.8	2----
TASMAN	1074		NZL	-43.52	170.32	5-2-4	S	S	3690	2210	730	95.2	28.5	2----
THURNEYSON	1554		NZL	-44.165	169.595	6-2-6	S	S	2425	2085	1720	1	1.23	2----
VERTEBRAE 20	3033		NZL	-43.33	170.59	4-3-8	S	S	1645	1450	1160		1.8	2----
VICTORIA	3034		NZL	-43.5	170.17	5-3-9	W	W	2560	1890	1065	4.6	6.5	2----
WHATAROA	2285		NZL	-43.4	170.53	6-3-8	W	SW	2180	1590	1005	3.2	3.35	2----
WHITBOURNE	1583		NZL	-44.47	168.57	5-3-9	W	S	2575	1830	1080	7	6.7	2----
WHITE	3037		NZL	-43	171.385	6-3-8	NE	NE	2320	2015	1710	0.7	1.8	2----
WHYMPER	1609		NZL	-43.486	170.362	5-3-9	NW	NE	2775	1780	790	7.6	7.2	2----
ZORA	1593		NZL	-43.75	169.83	6-2-8	S	S	2455	1920	1095	4.7	3.25	2----
PE - Peru														
ARTESONRAJU	3292	PE0003	TRP	-8.95	-77.62	5-3-4	W	W	5400	5050	4700	3.6	3.4	234--
GAJAP-YANACARCO	223	PE0009	TRP	-9.83	-77.17	6-3-4	SE	SE	5200	5033	4958	1.2	0.789	2----
PASTORURI	224	PE0008	TRP	-9.9	-77.17	6-3-0	NW	NW	5100	5095	5061	1.2	0.31	2----
QUESHQUE E	3529		TRP	-9.875	-77.25	X-X-X								2----
SHALLAP	3293	PE0003	TRP	-9.48	-77.33	5-2-4	NW	NW	5974	4873	4765		2.86	2----
URUASHRAJU	221	PE0005	TRP	-9.58	-77.32	5-3-0	SW	SW	5650	5006	4689	2.1	2.034	2----
YANAMAREY	226	PE0004	TRP	-9.653	-77.271	5-2-0	SW	SW	5200	4961	4720	0.2	1.33	234-6
PL - Poland														
POD BULA	1617	PL0111	CEU	49.185	20.08	7-5-6	NW	NW	1650		1610	0	0	2----
RU - Russia														
DJANKUAT	726	RU3010	CAU	43.194	42.761	5-2-9	N	NW	3800	3280	2700	2.7	3.4	23--6
GARABASHI	761	SU3031	CAU	43.3	42.47	0-0-3	SE	S	5000	3880	3300	4	5.8	-3--6
SE - Sweden														
ISFALLSGLACIAEREN	333	SE0787	SCA	67.915	18.568	5-3-6	E	E	1700		1250	1.4	1.9	2----
KARSOJIETNA	330	SE0798	SCA	68.358	18.321	5-3-8	NE	E	1500	1100	960	1.2	1.6	2----
MARMAGLACIAEREN	1461	SE0799	SCA	68.08	18.68	5-2-1	E	E	1740		1320	3.3	3.3	234-6
PASSUSJIETNA E	331	SE0797	SCA	68.05	18.43	5-3-8	NE	NW	1630		1270	1.3	1.5	2----
PASSUSJIETNA W	345	SE0796	SCA	68.05	18.38	5-3-8	E	NE	1750		1270	1.4	2.1	2----
RABOTS GLACIAER	334	SE0785	SCA	67.91	18.5	5-2-8	NW	W	1930		1080	3.1	3.7	-34-6
RIUKOJIETNA	342	SE0790	SCA	68.084	18.054	3-0-3	E	E	1440		1140	2.6	2.3	234-6
SALAJEKNA	341	SE0759	SCA	67.12	16.38	5-2-8	SE	S	1580		900	27.9	8.6	2----
STORGLACIAEREN	332	SE0788	SCA	67.903	18.568	5-2-8	E	E	1720		1160	2.9	3.4	23456
SJ - Svalbard (Norway)														
AUSTRE BROEGGERBREEN	292	SJ15504	SJM	78.888	11.831	5-2-9	NW	N	600	260	50	9.8	6	-3--6
AUSTRE LOVENBREEN	3812		SJM	78.871	12.154	5-2-2	N	N	550	326	103	4.3	3.8	23--6
HANSBREEN	306	SJ12419	SJM	77.077	15.63	4-2-4	S	S	510	255	0	56.7	14.969	234-6
IRENEBREEN	2669	SJ15402	SJM	78.665	12.125	X-X-X	NW	SW	650	340	125	3.6	3.86	-3--6
KONGSVEGEN	1456	SJ15510	SJM	78.8	12.98	4-2-4	NW	NW	1050	500	0	101.9	27	-3-56
KRONEBREEN	3504	SJ15511	SJM	78.967	13.183	4-2-4	S	W	1361		0	370		-3--6
MIDTRE LOVENBREEN	291	SJ15506	SJM	78.881	12.048	5-2-9	NE	N	650	330	50	5.2	4.8	-3--6
MONACOBREEN	8319		SJM	79.355	12.655	X-X-X			1277	627	31	394.3	43.226	2----
NORDENSKIOELDBREEN	3479	SJ14506	SJM	78.7	17.183	4-2-4	SW	W	1201	703	0	206.1		-3-56
WALDEMARBREEN	2307	SJ15403	SJM	78.677	12.069	5-3-8	NW	SW	570	320	100	2.4	3.3	-3456
WERENSKIOLDBREEN	305	SJ12501	SJM	77.067	15.367	5-2-8	S	SW	750	400	40	27.1	8.75	-34-6
US - United States of America														
BLACK RAPIDS	80	US0222	ALA	63.481	-146.507	5-1-7	N	E	3200	1750	800	289	43	---5-
BLUE GLACIER	210	US2126	WNA	47.819	-123.685	5-2-8	NE	N	2410	1815	1380	5.7	4.3	-3-56
COLUMBIA (2057)	76	US2057	WNA	47.964	-121.349	6-4-8	S	S	1725	1600	1450	0.8	1.53	234--
DANIELS	83	US2052	WNA	47.57	-121.17	6-3-6	NE	NE	2300	2200	2075	0.4	0.55	-3---
EASTON	1367	US2008	WNA	48.759	-121.825	5-3-8	SW	S	2900	2200	1710	2.9	3.97	23---
EEL	188	US2113	WNA	47.73	-123.33	5-3-8	N	N	2090		1610	0.6	2	-3-56
EMMONS	203	US2022	WNA	46.85	-121.72	5-3-9	NE	NE	4290		1480	11.3	2.8	-3-5-
GULKANA	90	US0200	ALA	63.281	-145.427	5-2-9	S	SW	2459	1840	1217	15.6	7.5	-3-56
ICE WORM	82	US2054	WNA	47.55	-121.17	6-4-8	E	E	2070	2010	1900	0.1	0.46	-3---
LEMON CREEK	3334		ALA	58.387	-134.346	X-X-X	N	NW	1494	1100	663	10.3	5.94	-3-56
LOWER CURTIS	77	US2055	WNA	48.826	-121.622	6-4-8	W	W	1850	1630	1490	0.8	0.72	23---
LYNCH	81	US2056	WNA	47.57	-121.18	6-5-4	N	N	2300	2185	1900	0.6	0.99	-3---
NISQUALLY	201	US2027	WNA	46.82	-121.74	5-2-9	S	S	4380		1480	6.7	2.9	---5-
NOISY CREEK	1666	US2078	WNA	48.674	-121.527	6-4-8	N	N	1920	1791	1680	0.5	1.14	-3-5-
NORTH KLAWATTI	1664	US2076	WNA	48.573	-121.093	5-5-X	SE	SE	2400	1729	1730	1.5	2.77	-3-5-
RAINBOW	79	US2003	WNA	48.8	-121.77	6-3-8	E	E	2040	1750	1340	1.4	1.92	234--
SANDALEE	1667	US2079	WNA	48.41	-120.79	6-4-5	N	N	2310	2154	1970	0.2	0.79	-3-5-
SHOLES	3295		WNA	48.814	-121.77	X-X-X	NE	NE	1960	1820	1690	0.9	0.94	23---
SILVER	1665	US2077	WNA	48.977	-121.24	6-4-8	N	NE	2710	2405	2100	0.4	0.925	-3-5-
SOUTH CASCADE	205	US2013	WNA	48.35	-121.055	5-3-8	N	N	2135	1920	1626	1.9	2.96	-3-56
SPERRY	218	US5001	WNA	48.63	-113.75	6-4-8	NW	NW	2789	2430	2261	0.8	1.21	-3-5-
TAKU	124	US1805	ALA	58.651	-134.278	4-2-2	SE	S	2100	1200	0	756.9	58.1	-3--6
WOLVERINE	94	US0411	ALA	60.417	-148.904	5-3-8	S	S	1672	1310	436	15.6	8	-3-56
YAWNING	75	US2050	WNA	48.447	-121.031	6-5-8	NE	NE	2100	1970	1880	0.3	0.65	-3---

APPENDIX - Table 2

VARIATIONS IN GLACIER FRONT POSITIONS 2016–2017

PU	Political unit, alphabetic 2-digit country code (cf. www.iso.org)	
GLACIER NAME	Name of the glacier in capital letters, cf. Appendix Table 1	
WGMS ID	Key identifier of the glacier, cf. Appendix Table 1	
FROM	Reference date of the survey, in the format YYYYMMDD*	
TO	Survey date, in the format YYYYMMDD*	
METHOD	Survey platform and method given by alphabetic 2 digit code	
	Platform (1st digit, lower case):	Method (2nd digit, upper case):
	t: terrestrial	R: reconstructed (e.g., historical sources)
	a: airborne	M: derived from maps
	s: spaceborne	G: ground survey (e.g., GPS, tachymetry, tape)
	c: combined	P: photogrammetry
	x: unknown	L: laser altimetry or scanning
		Z: radar altimetry or scanning
		C: combined
		X: other
FV	Variation in metres in the position of the glacier front in horizontal projection between reference and survey date	
	Qualitative variations are expressed by the following symbols:	
	+X: glacier in advance	
	-X: glacier in retreat	
	ST: glacier stationary	
	SN: glacier front covered by snow	
INVESTIGATORS (SPONS_AGENCY)	Names of the investigators and their sponsoring agencies (cf. Section 8)	

*Unknown month or day are each replaced by „99“

PU	GLACIER_NAME	WGMS_ID	FROM	TO	METHOD	FV	INVESTIGATORS_(SPONS_AGENCY)
AQ - Antarctica							
AQ	BAHIA DEL DIABLO	2665	20159999	20169999	cG	ST	Marinsek S. (IAA-DG), Seco J. (IAA-DG), Ermolin E. (IAA-DG)
AR - Argentina							
AR	AGUA NEGRA	4532	20130412	20160331	sP	-30	Pitte P. (IANIGLA), Del Castillo O. (IANIGLA)
AR	ALFA	10453	20100323	20170331	sP	-265	Ferri Hidalgo L. (IANIGLA)
AR	ALTO DEL PLOMO	922	20100323	20170331	sP	0	Ferri Hidalgo L. (IANIGLA)
AR	AZUFRE	2851	20100327	20160319	sP	-455	Zalazar L. (IANIGLA)
AR	BAJO DEL PLOMO	10455	20100323	20170331	sP	-123	Ferri Hidalgo L. (IANIGLA)
AR	BETA	10454	20100323	20170331	sP	-126	Ferri Hidalgo L. (IANIGLA)
AR	CAMISA	3591	20110330	20170406	sP	-72	
AR	COBRE	10457	20110408	20160319	sP	-276	Zalazar L. (IANIGLA)
AR	ESPERANZA NORTE	3711	20099999	20169999		-52	Ruiz L. (IANIGLA)
AR	FRIAS	1347	20129999	20169999	sP	-6	Ruiz L. (IANIGLA)
AR	GUSSFELDT	2848	20150318	20170306	sP	0	Zalazar L. (IANIGLA)
AR	MARMOLEJO	3590	20110330	20170406	sP	-216	Gargantini H. (IANIGLA)
AR	PENON	2850	20100327	20160319	sP	-440	Zalazar L. (IANIGLA)
AR	SAN JOSE	3593	20110330	20170406	sP	-141	
AR	TUPUNGATO 01	2852	20100323	20170331	sP	-61	Ferri Hidalgo L. (IANIGLA)
AR	VACAS	2849	20150318	20170306	sP	-30	Zalazar L. (IANIGLA)
AT - Austria							
AT	AEU.PIRCHLKAR	504	20150818	20160817		-18	Schöpf R. (ÖAV)
AT	ALPEINER F.	497	20151003	20160914		-23	Schießling P. (ÖAV)
AT	ALPEINER F.	497	20169999	20170929		-95	Stocker-Waldhuber M. (ÖAV)
AT	BACHFALLEN F.	500	20150831	20160826		-38	Dünser F. (ÖAV), Janz B. (ÖAV)
AT	BACHFALLEN F.	500	20169999	20170908		-34	Dünser F. (ÖAV), Janz B. (ÖAV)
AT	BAERENKOPF K.	567		20160904		-7	Seitlinger G. (ÖAV)
AT	BAERENKOPF K.	567	20169999	20171021		-13	Seitlinger G. (ÖAV)
AT	BERGLAS F.	496	20151003	20160914		-11	Schießling P. (ÖAV)
AT	BERGLAS F.	496	20169999	20170929		-6	Stocker-Waldhuber M. (ÖAV)
AT	BIELTAL F.	481	20150921	20160913		-7	Groß G. (ÖAV)
AT	BIELTAL F.	481	20169999	20170908		-12	Groß G. (ÖAV)
AT	BRENNKOGL K.	528	20150910	20160909		-8	Seitlinger G. (ÖAV)
AT	BRENNKOGL K.	528	20169999	20170829		-14	Seitlinger G. (ÖAV)
AT	DAUNKOGEL F.	604	20150918	20160913		-44	Schießling P. (ÖAV)
AT	DAUNKOGEL F.	604	20169999	20170930		-37	Stocker-Waldhuber M. (ÖAV)
AT	DIEM F.	513	20151003	20160921		-4	Schöpf R. (ÖAV)
AT	DIEM F.	513	20169999	20171017		-35	Schöpf R. (ÖAV)
AT	EISKAR G.	1632	20150906	20160903		-2	Hohenwarter G. (ÖAV)
AT	EISKAR G.	1632	20169999	20170909		-4	Hohenwarter G. (ÖAV)
AT	FERNAU F.	601	20150918	20160913		-35	Schießling P. (ÖAV)
AT	FERNAU F.	601	20169999	20170930		-4	Stocker-Waldhuber M. (ÖAV)
AT	FIRMISAN F.	4337	20150916	20160915		-14	Strudl M. (ÖAV)
AT	FIRMISAN F.	4337	20169999	20170908		-14	Strudl M. (ÖAV)
AT	FREIWAND K.	564	20150916	20160912		-8	Lieb G. (ÖAV)
AT	FREIWAND K.	564	20169999	20170911		-89	Lieb G. (ÖAV), Kellerer-Pirklbauer A. (ÖAV)
AT	FROSNITZ K.	579	20150827	20160901		-36	Lang J. (ÖAV)
AT	FROSNITZ K.	579	20169999	20171016		-49	Luzian R. (ÖAV), Lang J. (ÖAV)
AT	GAISKAR F.	530	20150830	20160904		-24	Dünser F. (ÖAV), Janz B. (ÖAV)
AT	GAISKAR F.	530	20169999	20170929		-9	Dünser F. (ÖAV), Janz B. (ÖAV)
AT	GAISSBERG F.	508	20150929	20160921		-17	Patzelt G. (ÖAV)
AT	GEPATSCH F.	522	20151011	20161001		-4	Noggler B. (ÖAV)
AT	GEPATSCH F.	522	20169999	20171005		-125	Noggler B. (ÖAV)
AT	GOESSNITZ K.	532	20150831	20160909		-8	Krobath M. (ÖAV)
AT	GOESSNITZ K.	532	20169999	20170908		-8	Krobath M. (ÖAV)
AT	GOLDBERG K.	1305	20151005	20160919		-11	Binder D. (ÖAV)
AT	GOLDBERG K.	1305	20169999	20171005		0	Neureiter A. (ÖAV)
AT	GR. GOSAU G.	536	20150828	20160915		-10	Reingruber K. (ÖAV)
AT	GR. GOSAU G.	536	20169999	20170908		-8	Reingruber K. (ÖAV)
AT	GROSSELEND K.	542	20150824	20160829		-4	Knittel A. (ÖAV)
AT	GROSSELEND K.	542	20169999	20170827		-13	Knittel A. (ÖAV), Färber J. (ÖAV)
AT	GRUENAU F.	599	20169999	20170930		-3	Stocker-Waldhuber M. (ÖAV)
AT	GURGLER F.	511	20150922	20160922		-8	Patzelt G. (ÖAV)
AT	GUSLAR F.	490	20150820	20160819		-13	Span N. (ÖAV)
AT	GUSLAR F.	490	20169999	20170816		-21	Span N. (ÖAV)
AT	HALLSTAETTER G.	535	20150928	20160923		-19	Reingruber K. (ÖAV)
AT	HALLSTAETTER G.	535	20169999	20170901		-12	Reingruber K. (ÖAV)
AT	HAUER F.	10458	20169999	20170930		-9	Schöpf R. (ÖAV)
AT	HINTEREIS F.	491	20150919	20161017		-4	Span, N. (ÖAV)
AT	HINTEREIS F.	491	20169999	20170817		-23	Span N. (ÖAV)
AT	HOCHALM K.	538	20150823	20160828		-7	Knittel A. (ÖAV)
AT	HOCHALM K.	538	20169999	20170827		-11	Knittel A. (ÖAV), Färber J. (ÖAV)
AT	HOCHJOCH F.	492	20150817	20160816		-18	Span N. (ÖAV)
AT	HOCHJOCH F.	492	20169999	20170814		-36	Span N. (ÖAV), Strudl M. (ÖAV), Schöpf R. (ÖAV)
AT	HORN K. (SCHOB.)	531	20150831	20160909		-7	Krobath M. (ÖAV)
AT	HORN K. (SCHOB.)	531	20169999	20170908		-12	Krobath M. (ÖAV)
AT	HORN K. (ZILLER)	589	20150930	20160924		-65	Friedrich R. (ÖAV)
AT	HORN K. (ZILLER)	589	20169999	20170927		-21	Friedrich R. (ÖAV)
AT	INN. PIRCHLKAR	505	20150913	20161014		-8	Schöpf R. (ÖAV)
AT	INN. PIRCHLKAR	505	20169999	20170917		-21	Schöpf R. (ÖAV)
AT	JAMTAL F.	480	20150916	20160913		-9	Groß G. (ÖAV)
AT	JAMTAL F.	480	20169999	20170829		-13	Groß G. (ÖAV)
AT	KAELBERSPITZ K.	540	20150825	20160831		-11	Knittel A. (ÖAV)
AT	KAELBERSPITZ K.	540	20169999	20170829		-14	Knittel A. (ÖAV), Färber J. (ÖAV)
AT	KALSER BAERENKOPF K.	2676	20150911	20160827		-5	Zagel B. (ÖAV)
AT	KALSER BAERENKOPF K.	2676	20169999	20170830		-4	Seitlinger G. (ÖAV)
AT	KARLINGER K.	568		20160904		-28	Seitlinger G. (ÖAV)
AT	KARLINGER K.	568	20169999	20171021		-9	Seitlinger G. (ÖAV)
AT	KLEINEISER K.	555	20150912	20160904		-1	Seitlinger G. (ÖAV)
AT	KLEINELEND K.	541	20150825	20160830		-17	Knittel A. (ÖAV)
AT	KLEINELEND K.	541	20169999	20170829		-9	Knittel A. (ÖAV), Färber J. (ÖAV)
AT	KLEINFLEISS K.	547	20151006	20160917		-2	Binder D. (ÖAV)
AT	KLEINFLEISS K.	547	20169999	20171005		-5	Neureiter A. (ÖAV)
AT	KLOSTERTALER M	485	20151002	20160908		-3	Groß G. (ÖAV)
AT	KLOSTERTALER M	485	20169999	20170928		-11	Groß G. (ÖAV)

PU	GLACIER_NAME	WGMS_ID	FROM	TO	METHOD	FV	INVESTIGATORS_(SPONS_AGENCY)
AT	KRIMMLER K.	584	20169999	20171015		-45	Luzian R. (ÖAV), Lang J. (ÖAV)
AT	LANDECK K.	569	20150917	20160913		1	Zagel B. (ÖAV)
AT	LANDECK K.	569	20169999	20170831		-15	Seitlinger G. (ÖAV)
AT	LANGTALER F.	510	20150922	20160922		-19	Patzelt G. (ÖAV)
AT	LATSCH F.	4338	20150916	20160915		-21	Strudl M. (ÖAV)
AT	LATSCH F.	4338	20169999	20170908		-18	Strudl M. (ÖAV)
AT	MARZELL F.	515	20150919	20161001		-25	Schöpf R. (ÖAV)
AT	MAURER K. (GLO.)	558	20150916	20160910		-3	Seitlinger G. (ÖAV)
AT	MITTERKAR F.	487	20150912	20160919		-7	Schöpf R. (ÖAV)
AT	NIEDERJOCH F.	516	20150919	20161001		-34	Schöpf R. (ÖAV)
AT	OCHSENTALER G.	483	20150831	20160903		-11	Groß G. (ÖAV)
AT	OCHSENTALER G.	483	20169999	20170908		-17	Groß G. (ÖAV)
AT	OEDENWINKEL K.	559	20150830	20160826		-18	Seitlinger G. (ÖAV)
AT	OEDENWINKEL K.	559	20169999	20170827		-22	Zagel B. (ÖAV), Seitlinger G. (ÖAV)
AT	PASTERZE	566	20150917	20160912		-44	Lieb G. (ÖAV)
AT	PASTERZE	566	20169999	20170912		-62	Lieb G. (ÖAV), Kellerer-Pirklbauer A. (ÖAV)
AT	PFAFFEN F.	591	20150830	20160903		-8	Dünser F. (ÖAV), Janz B. (ÖAV)
AT	PFAFFEN F.	591	20169999	20170929		-15	Dünser F. (ÖAV), Janz B. (ÖAV)
AT	RETTENBACH F.	488	20150906	20160913		-16	Schöpf R. (ÖAV)
AT	RETTENBACH F.	488	20169999	20170914		-9	Schöpf R. (ÖAV)
AT	ROFENKAR F.	518	20150912	20160912		-5	Schöpf R. (ÖAV)
AT	ROFENKAR F.	518	20169999	20170923		-9	Schöpf R. (ÖAV)
AT	ROTER KNOPF K.	3297	20150901	20160909		-2	Krobath M. (ÖAV)
AT	ROTER KNOPF K.	3297	20169999	20170908		-2	Krobath M. (ÖAV)
AT	ROTMOOS F.	509	20150929	20160923		-10	Patzelt G. (ÖAV)
AT	SCHALF F.	514	20150919	20161006		-39	Schöpf R. (ÖAV)
AT	SCHLADMINGER G.	534	20151006	20160928		-3	Reingruber K. (ÖAV)
AT	SCHLADMINGER G.	534	20169999	20171002		-8	Reingruber K. (ÖAV)
AT	SCHLATEN K.	580	20150922	20160901		-50	Luzian R. (ÖAV)
AT	SCHLATEN K.	580	20169999	20170905		-70	Luzian R. (ÖAV), Lang J. (ÖAV)
AT	SCHMIEDINGER K.	548	20150909	20160831		-12	Seitlinger G. (ÖAV)
AT	SCHMIEDINGER K.	548	20169999	20171020		-11	Seitlinger G. (ÖAV)
AT	SCHNEEGLOCKEN	525	20150831	20160903		-7	Groß G. (ÖAV)
AT	SCHNEEGLOCKEN	525	20169999	20170908		-15	Groß G. (ÖAV)
AT	SCHNEELOCH G.	533	20150827	20160916		-5	Reingruber K. (ÖAV)
AT	SCHNEELOCH G.	533	20169999	20170908		-14	Reingruber K. (ÖAV)
AT	SCHWARZENBERG F.	501	20150910	20160908		-6	Dünser F. (ÖAV), Janz B. (ÖAV)
AT	SCHWARZENBERG F.	501	20169999	20170929		-13	Dünser F. (ÖAV), Janz B. (ÖAV)
AT	SCHWARZKARL K.	556	20150912	20160904		-15	Seitlinger G. (ÖAV)
AT	SCHWEIKERT F.	4336	20150911	20160902		-11	Strudl M. (ÖAV)
AT	SCHWEIKERT F.	4336	20169999	20170909		-29	Strudl M. (ÖAV)
AT	SEEKARLES F.	10459	20169999	20170922		-6	Strudl M. (ÖAV)
AT	SEXEGERTEN F.	520	20151010	20160930		-20	Noggler B. (ÖAV)
AT	SEXEGERTEN F.	520	20169999	20170928		-46	Noggler B. (ÖAV)
AT	SIMILAUN F.	3296	20150919	20161008		-3	Schöpf R. (ÖAV)
AT	SIMONY K.	575	20150826	20160903		-17	Lang J. (ÖAV)
AT	SIMONY K.	575	20169999	20170904		0	Luzian R. (ÖAV), Lang J. (ÖAV)
AT	SPIEGEL F.	512	20151003	20160921		-11	Schöpf R. (ÖAV)
AT	SPIEGEL F.	512	20169999	20171017		-16	Schöpf R. (ÖAV)
AT	STUBACHER SONNBLICK K.	573	20150922	20160908		-9	Seitlinger G. (ÖAV)
AT	STUBACHER SONNBLICK K.	573	20169999	20170829		-2	Seitlinger G. (ÖAV)
AT	SULZTAL F.	503	20150830	20160908		-14	Dünser F. (ÖAV), Janz B. (ÖAV)
AT	SULZTAL F.	503	20169999	20170929		-29	Dünser F. (ÖAV), Janz B. (ÖAV)
AT	TASCHACH F.	519	20151010	20160930		-19	Noggler B. (ÖAV)
AT	TASCHACH F.	519	20169999	20170928		-54	Noggler B. (ÖAV)
AT	TOTENFELD	524	20150916	20160913		-5	Groß G. (ÖAV)
AT	TOTENFELD	524	20169999	20170829		-13	Groß G. (ÖAV)
AT	TOTENKOPF K.	2680	20150912	20160902		-1	Seitlinger G. (ÖAV)
AT	TOTENKOPF K.	2680	20169999	20170830		-2	Zagel B. (ÖAV), Seitlinger G. (ÖAV)
AT	TRIEBENKARLAS F.	592	20150829	20160903		-35	Dünser F. (ÖAV), Janz B. (ÖAV)
AT	TRIEBENKARLAS F.	592	20169999	20171020		-31	Dünser F. (ÖAV), Janz B. (ÖAV)
AT	UMBAL K.	574	20150826	20160903		-16	Lang J. (ÖAV)
AT	UMBAL K.	574	20169999	20170906		-29	Luzian R. (ÖAV), Lang J. (ÖAV)
AT	UNT. RIFFL K.	605	20150913	20160903		-3	Seitlinger G. (ÖAV)
AT	UNT. RIFFL K.	605	20169999	20170831		-11	Zagel B. (ÖAV), Seitlinger G. (ÖAV)
AT	UNTERSULZBACH K.	582	20169999	20170802		42	Luzian R. (ÖAV), Lang J. (ÖAV)
AT	VERBORGENBERG F.	593	20151003	20160914		-7	Schießling P. (ÖAV)
AT	VERBORGENBERG F.	593	20169999	20170929		-8	Stocker-Waldhuber M. (ÖAV)
AT	VERMUNT G.	482	20150912	20160903		-21	Groß G. (ÖAV)
AT	VERMUNT G.	482	20169999	20170908		-33	Groß G. (ÖAV)
AT	VERNAGT F.	489	20150820	20160819		-17	Span N. (ÖAV)
AT	VERNAGT F.	489	20169999	20170816		-25	Span N. (ÖAV)
AT	VILTRAGEN K.	581	20150922	20160903		-15	Luzian R. (ÖAV)
AT	VILTRAGEN K.	581	20169999	20170905		-28	Luzian R. (ÖAV), Lang J. (ÖAV)
AT	W. TRIPP K.	539	20150826	20160933		-35	Knittel A. (ÖAV)
AT	W. TRIPP K.	539	20169999	20170830		-49	Knittel A. (ÖAV), Färber J. (ÖAV)
AT	WASSERFALLWINKL	565	20150916	20160913		-39	Lieb G. (ÖAV)
AT	WASSERFALLWINKL	565	20169999	20170913		-13	Lieb G. (ÖAV), Kellerer-Pirklbauer A. (ÖAV)
AT	WAXEGG K.	590	20150829	20160923		-32	Friedrich R. (ÖAV)
AT	WAXEGG K.	590	20169999	20170928		-120	Friedrich R. (ÖAV)
AT	WEISSEE F.	523	20151011	20160903		-20	Noggler B. (ÖAV)
AT	WEISSEE F.	523	20169999	20171005		-41	Noggler B. (ÖAV)
AT	WILDGERLOS	587	20150806	20160913		-13	Nussbaumer S. (ÖAV)
AT	WILDGERLOS	587	20169999	20170908		-21	Nussbaumer S. (ÖAV)
AT	WINKL K.	537	20150826	20160816		-1	Knittel A. (ÖAV)
AT	WINKL K.	537	20169999	20170830		-118	Knittel A. (ÖAV), Färber J. (ÖAV)
AT	WURTEN K.	545	20160915	20171005	tG	-11	Neureiter A. (ZAMG), Weyss G. (ZAMG)
AT	ZETTALUNITZ/MULLWITZ K.	578	20150827	20160902		-51	Lang J. (ÖAV)
AT	ZETTALUNITZ/MULLWITZ K.	578	20169999	20170904		-54	Luzian R. (ÖAV), Lang J. (ÖAV)

BO - Bolivia

PU	GLACIER_NAME	WGMS_ID	FROM	TO	METHOD	FV	INVESTIGATORS_(SPONS_AGENCY)
BO	CHARQUINI SUR	2667	20130410	20160817	tG	-53	Soruco A. (UMSA)
BO	CHARQUINI SUR	2667	20160817	20170821	tG	-21	Soruco A. (UMSA)
BO	ZONGO	1503	20150916	20160816	tG	-30	Soruco A. (UMSA)
BO	ZONGO	1503	20160816	20170927	tG	-22	Soruco A. (UMSA)

PU	GLACIER_NAME	WGMS_ID	FROM	TO	METHOD	FV	INVESTIGATORS_(SPONS_AGENCY)
CH - Switzerland							
CH	ALBIGNA	1674	20150904	20171007	t	-36	Keiser M. (GR-Forest)
CH	ALLALIN	394	20150921	20160929	a	0	Bauder A. (VAW)
CH	ALLALIN	394	20160929	20171005	a	-13	Bauder A. (VAW)
CH	ALPETLI (KANDER)	439	20160928	20170913	t	-18	Burgener U. (BE-Forest)
CH	AMMERTEN	435	20150920	20160911	t	-1	Hodel W. (private)
CH	AMMERTEN	435	20160911	20171007	t	-3	Hodel W. (private)
CH	AROLLA (BAS)	377	20151021	20161010	t	-13	Fellay F. (VS-Forest)
CH	AROLLA (BAS)	377	20161010	20171010	t	-22	Fellay F. (VS-Forest)
CH	BASODINO	463	20150929	20160906	t	-10	Soldati M. (TI-Forest)
CH	BASODINO	463	20160906	20170919	t	-6	Soldati M. (TI-Forest)
CH	BIFERTEN	422	20151003	20160910	t	-9	Klauser H. (private)
CH	BIFERTEN	422	20160910	20170930	t	-11	Klauser H. (private)
CH	BLUEMLISALP	436	20150921	20160930	t	-18	. (), Burgener U. (BE-Forest)
CH	BLUEMLISALP	436	20160930	20170927	t	-21	Burgener U. (BE-Forest)
CH	BOVEYRE	459	20151019	20160811	t	-10	Medico J. (VS-Forest)
CH	BOVEYRE	459	20160811	20170915	t	-22	Medico J. (VS-Forest)
CH	BRENEY	368	20150830	20160822	t	-27	Chabloz J. (private)
CH	BRENEY	368	20160822	20170824	t	-37	Chabloz J. (private)
CH	BRESCIANA	465	20141003	20160912	t	-9	Soldati M. (TI-Forest)
CH	BRESCIANA	465	20160912	20170929	t	-19	Soldati M. (TI-Forest)
CH	BRUNEGG	384	20151007	20160908	t	-19	Brigger A. (VS-Forest)
CH	BRUNEGG	384	20160908	20171002	t	-41	Brigger A. (VS-Forest)
CH	BRUNNI	427	20150826	20160826	t	-1	Planzer M. (UR-Forest)
CH	BRUNNI	427	20160826	20170825	t	-1	Planzer M. (UR-Forest)
CH	CALDERAS	403	20151005	20160825	t	-7	Godly G. (GR-Forest)
CH	CALDERAS	403	20160825	20170828	t	-21	Godly G. (GR-Forest)
CH	CAMBRENA	399	20150818	20160818	t	-14	Berchier G. (GR-Forest)
CH	CAMBRENA	399	20160818	20171018	t	-27	Berchier G. (GR-Forest)
CH	CAVAGNOLI	464	20150930	20160914	t	-10	Soldati M. (TI-Forest)
CH	CAVAGNOLI	464	20160914	20170925	t	-14	Soldati M. (TI-Forest)
CH	CHEILLON	375	20150930	20161006	t	-7	Bourdin O. (VS-Forest)
CH	CHEILLON	375	20161006	20171013	t	-22	Bourdin O. (VS-Forest)
CH	CORBASSIERE	366	20150921	20160929	a	-37	Bauder A. (VAW)
CH	CORBASSIERE	366	20160929	20170805	a	-17	Bauder A. (VAW)
CH	CORNO	468	20150901	20160909	t	-4	Soldati M. (TI-Forest)
CH	CORNO	468	20160909	20171009	t	-11	Soldati M. (TI-Forest)
CH	CROSLINA	1681	20150928	20160907	t	-2	Soldati M. (TI-Forest)
CH	CROSLINA	1681	20160907	20170920	t	-6	Soldati M. (TI-Forest)
CH	DAMMA	429	20150922	20160909	t	-37	Planzer M. (UR-Forest)
CH	DAMMA	429	20160909	20171005	t	-24	Planzer M. (UR-Forest)
CH	EIGER	442	20150925	20160913	t	-1	Schai R. (BE-Forest)
CH	EIGER	442	20160913	20170814	t	-13	Schai R. (BE-Forest)
CH	FEE NORTH	392	20151002	20160928	t	-20	Andenmatten U. (VS-Forest)
CH	FEE NORTH	392	20160928	20171005	t	-17	Andenmatten U. (VS-Forest)
CH	FERPECLE	379	20151022	20161007	t	-79	Fellay F. (VS-Forest)
CH	FERPECLE	379	20161007	20171012	t	-152	Fellay F. (VS-Forest)
CH	FINDELEN	389	20150805	20160826	a	-31	Bauder A. (VAW)
CH	FINDELEN	389	20160826	20170905	a	-37	Bauder A. (VAW)
CH	FIRNALPELI	424	20140828	20160902	t	25	Jäggi M. (OW-Forest)
CH	FORNO	396	20150902	20160909	t	28	Keiser M. (GR-Forest)
CH	FORNO	396	20160909	20171007	t	-31	Keiser M. (GR-Forest)
CH	GAMCHI	440	20151001	20161011	t	-6	Descloux R. (BE-Forest)
CH	GAMCHI	440	20161011	20171019	t	-30	Descloux R. (BE-Forest)
CH	GAULI	449	20150921	20170928	t	-19	Rohrer D. (BE-Forest)
CH	GIETRO	367	20150921	20160929	a	-8	Bauder A. (VAW)
CH	GIETRO	367	20160929	20170805	a	-17	Bauder A. (VAW)
CH	GLAERNISCH	418	20150929	20161031	t	-11	Klauser H. (private)
CH	GLAERNISCH	418	20161031	20171101	t	-31	Klauser H. (private)
CH	GORNER	391	20150921	20161104	t	-61	Jörger L. (VS-Forest), Walther S. (VS-Forest)
CH	GORNER	391	20161104	20171013	t	-31	Jörger L. (VS-Forest), Walther S. (VS-Forest)
CH	GRAND DESERT	373	20150919	20160925	t	-4	Vouillamoz F. (VS-Forest)
CH	GRAND DESERT	373	20160925	20170913	t	-27	Vouillamoz F. (VS-Forest)
CH	GRAND PLAN NEVE	455	20151002	20160922	t	1	Marlètaz J. (VD-Forest)
CH	GRAND PLAN NEVE	455	20160922	20170908	t	-12	Marlètaz J. (VD-Forest)
CH	GRIES	359	20150831	20160826	a	-23	Bauder A. (VAW)
CH	GRIES	359	20160826	20170807	a	-31	Bauder A. (VAW)
CH	GRIESS (KLAUSEN)	425	20151001	20160920	t	-6	Annen B. (UR-Forest)
CH	GRIESS (KLAUSEN)	425	20160920	20171005	t	-18	Annen B. (UR-Forest)
CH	GRIESSEN (OBWALDEN)	423	20151002	20160913	t	-4	Jäggi M. (OW-Forest)
CH	GROSSER ALETSCH	360	20150826	20160808	a	-59	Bauder A. (VAW)
CH	GROSSER ALETSCH	360	20160808	20170807	a	-80	Bauder A. (VAW)
CH	HINTERSULZFIRN	419	20151012	20161028	t	-6	Köpfli P. (GL-Forest)
CH	HINTERSULZFIRN	419	20161028	20170928	t	-5	Landolt M. (GL-Forest)
CH	HOHLAUB	3332	20150921	20160929	a	-13	Bauder A. (VAW)
CH	HOHLAUB	3332	20160929	20171005	a	-9	Bauder A. (VAW)
CH	KALTWASSER	363	20150930	20161005	t	-26	Schmidhalter M. (VS-Forest)
CH	KALTWASSER	363	20161005	20171005	t	-9	Schmidhalter M. (VS-Forest)
CH	KEHLEN	431	20150921	20160908	t	-10	Planzer M. (UR-Forest)
CH	KEHLEN	431	20160908	20170908	t	-16	Planzer M. (UR-Forest)
CH	KESSJEN	393	20150921	20160929	a	-3	Bauder A. (VAW)
CH	KESSJEN	393	20160929	20171005	a	-4	Bauder A. (VAW)
CH	LAEMMERN (WILDSTRUBEL)	437	20150911	20160922	t	-8	Coleman Brantschen E. (BE-Forest)
CH	LAEMMERN (WILDSTRUBEL)	437	20160922	20170908	t	-18	Meier-Glaser A. (BE-Forest)
CH	LANG	386	20151110	20161130	t	17	Henzen H. (VS-Forest)
CH	LANG	386	20161130	20171031	t	-38	Henzen H. (VS-Forest)
CH	LAVAZ	416	20150821	20160817	t	0	Lutz R. (GR-Forest)
CH	LENTA	414	20140829	20160823	t	-787	Riedi B. (GR-Forest)
CH	LENTA	414	20160823	20170821	t	-22	Riedi B. (GR-Forest)
CH	LIMMERN	421	20150930	20160923	t	-3	Steinegger U. (private)
CH	LIMMERN	421	20160923	20171007	t	-16	Steinegger U. (private)
CH	LISCHANA	400	20150915	20160902	t	1	Duri K. (GR-Forest)
CH	MOIRY	380	20150923	20160922	t	-28	Chevalier G. (VS-Forest)
CH	MOIRY	380	20160922	20170925	t	-25	Chevalier G. (VS-Forest)
CH	MOMING	381	20150929	20160824	t	-20	Stoebener P. (VS-Forest)
CH	MOMING	381	20160824	20170825	t	-6	Stoebener P. (VS-Forest)

PU	GLACIER_NAME	WGMS_ID	FROM	TO	METHOD	FV	INVESTIGATORS_(SPONS_AGENCY)
CH	MONT DURAND	369	20150827	20160824	t	-27	Chabloz J. (private)
CH	MONT DURAND	369	20160824	20170830	t	-54	Chabloz J. (private)
CH	MONT MINE	378	20151022	20161007	t	-14	Fellay F. (VS-Forest)
CH	MONT MINE	378	20161007	20171012	t	-26	Fellay F. (VS-Forest)
CH	MORTERATSCH, VADRET DA	1673	20151017	20160917	t	-135	Godly G. (GR-Forest)
CH	MORTERATSCH, VADRET DA	1673	20160917	20171006	t	-20	Godly G. (GR-Forest)
CH	MUTT	472	20120907	20170901	a	-26	Bauder A. (VAW)
CH	OBERER GRINDELWALD	444	20150805	20160826	a	-42	Bauder A. (VAW)
CH	OBERER GRINDELWALD	444	20160826	20170829	a	1	Bauder A. (VAW)
CH	OTEMMA	370	20150829	20160823	t	-77	Chabloz J. (private)
CH	PALUE	398	20150925	20160906	t	-16	Berchier G. (GR-Forest)
CH	PALUE	398	20160906	20171012	t	-12	Berchier G. (GR-Forest)
CH	PANEYROSSE	456	20150930	20160913	t	-2	Marlètaz J. (VD-Forest)
CH	PANEYROSSE	456	20160913	20170907	t	-5	Marlètaz J. (VD-Forest)
CH	PARADIES	412	20151005	20160831	t	7	Fisler C. (GR-Forest)
CH	PARADIES	412	20160831	20170907	t	-21	Fisler C. (GR-Forest)
CH	PARADISINO (CAMPO)	397	20150928	20171018	t	-13	Berchier G. (GR-Forest)
CH	PIZOL	417	20151009	20160916	t	0	Brandes T. (SG-Forest)
CH	PLATTALVA	420	20151001	20160924	t	-17	Steinegger U. (private)
CH	PLATTALVA	420	20160924	20171007	t	-15	Steinegger U. (private)
CH	PORCHABELLA	410	20150909	20160907	t	-23	Bieler C. (GR-Forest)
CH	PORCHABELLA	410	20160907	20170921	t	-15	Bieler C. (GR-Forest)
CH	PRAPIO	453	20150827	20160929	t	-3	Binggeli J. (VD-Forest)
CH	PRAPIO	453	20160929	20171017	t	-6	Binggeli J. (VD-Forest)
CH	PUNTEGLIAS	415	20150922	20160914	t	-3	Buchli C. (GR-Forest)
CH	PUNTEGLIAS	415	20160914	20171012	t	-28	Buchli C. (GR-Forest)
CH	RAETZLI (PLAINE MORTE)	434	20150805	20160907	a	-6	Bauder A. (VAW)
CH	RAETZLI (PLAINE MORTE)	434	20160907	20170829	a	-9	Bauder A. (VAW)
CH	RHONE	473	20150805	20160808	a	-18	Bauder A. (VAW)
CH	RHONE	473	20160808	20170921	a	-36	Bauder A. (VAW)
CH	RIED	387	20151010	20161009	t	-40	Rovina P. (VS-Forest)
CH	RIED	387	20161009	20171007	t	-6	Rovina P. (VS-Forest)
CH	ROSEG	406	20151014	20161006	t	-2	Godly G. (GR-Forest)
CH	ROSEG	406	20161006	20170913	t	-14	Godly G. (GR-Forest)
CH	ROTFIRN NORD	430	20150921	20160908	t	-20	Planzer M. (UR-Forest)
CH	ROTFIRN NORD	430	20160908	20170908	t	-13	Planzer M. (UR-Forest)
CH	SALEINA	458	20151001	20160825	t	-4	Medico J. (VS-Forest)
CH	SALEINA	458	20160825	20171005	t	-13	Medico J. (VS-Forest)
CH	SANKT ANNA	432	20151002	20161031	t	-13	Eggimann L. (UR-Forest)
CH	SANKT ANNA	432	20161031	20171004	t	-8	Eggimann L. (UR-Forest)
CH	SARDONA	407	20150929	20161004	t	-8	Nigg S. (SG-Forest)
CH	SCALETTA	1680	20130907	20170731	t	-240	Teufen B. (private)
CH	SCHWARZBERG	395	20150921	20160929	a	-28	Bauder A. (VAW)
CH	SCHWARZBERG	395	20160929	20171005	a	-40	Bauder A. (VAW)
CH	SEEWJINEN	3333	20150921	20160929	a	-7	Bauder A. (VAW)
CH	SEEWJINEN	3333	20160929	20171005	a	-14	Bauder A. (VAW)
CH	SESVENNA	401	20150821	20160831	t	-14	Duri K. (GR-Forest)
CH	SESVENNA	401	20160831	20170831	t	-20	Duri K. (GR-Forest)
CH	SEX ROUGE	454	20150806	20160825	t	3	Binggeli J. (VD-Forest)
CH	SEX ROUGE	454	20160825	20170908	t	-9	Binggeli J. (VD-Forest)
CH	SILVRETTA	408	20150807	20160907	a	-17	Bauder A. (VAW)
CH	SILVRETTA	408	20160907	20170825	a	-17	Bauder A. (VAW)
CH	STEIN	448	20150913	20160826	t	-29	Rohrer D. (BE-Forest)
CH	STEIN	448	20160826	20170908	t	-26	Rohrer D. (BE-Forest)
CH	STEINLIMMI	447	20150913	20160826	t	-42	Rohrer D. (BE-Forest)
CH	STEINLIMMI	447	20160826	20170908	t	-7	Rohrer D. (BE-Forest)
CH	SURETTA	411	20150908	20160825	t	0	Fisler C. (GR-Forest)
CH	SURETTA	411	20160825	20170824	t	-14	Fisler C. (VS-Forest)
CH	TIATSCHA	402	20150807	20160907	a	-22	Bauder A. (VAW)
CH	TIEFEN	433	20151002	20161008	t	-23	Eggimann L. (UR-Forest)
CH	TIEFEN	433	20161008	20171005	t	-620	Eggimann L. (UR-Forest)
CH	TORTIN GLACIER DE (MONT FORT)	372	20150927	20160919	t	-14	Vouillamoz F. (VS-Forest)
CH	TORTIN GLACIER DE (MONT FORT)	372	20160919	20170916	t	-15	Vouillamoz F. (VS-Forest)
CH	TRIENT	457	20150927	20160925	t	-15	Ehinger J. (private)
CH	TRIENT	457	20160925	20171007	t	-38	Ehinger J. (private)
CH	TRIFT (GADMEN)	446	20150805	20160808	a	-1	Bauder A. (VAW)
CH	TRIFT (GADMEN)	446	20160808	20170822	a	0	Bauder A. (VAW)
CH	TSANFLEURON	371	20151023	20161005	t	-14	Fellay F. (VS-Forest)
CH	TSANFLEURON	371	20161005	20171011	t	-19	Fellay F. (VS-Forest)
CH	TSCHIERVA	405	20151014	20161006	t	-21	Godly G. (GR-Forest)
CH	TSCHIERVA	405	20161006	20170913	t	-31	Godly G. (GR-Forest)
CH	TSCHINGEL	441	20150922	20160914	t	-2	Schai R. (BE-Forest)
CH	TSCHINGEL	441	20160914	20170922	t	-3	Schai R. (BE-Forest)
CH	TSEUDET	364	20151019	20160812	t	-2	Medico J. (VS-Forest)
CH	TSEUDET	364	20160812	20171017	t	-8	Medico J. (VS-Forest)
CH	TSIDJIORE NOUVE	376	20151021	20161010	t	-9	Fellay F. (VS-Forest)
CH	TSIDJIORE NOUVE	376	20161010	20171010	t	-15	Fellay F. (VS-Forest)
CH	TURTMANN (WEST)	385	20151007	20160908	t	-30	Brigger A. (VS-Forest)
CH	TURTMANN (WEST)	385	20160908	20171002	t	-42	Brigger A. (VS-Forest)
CH	UNTERER GRINDELWALD	443	20150805	20160826	a	-370	Bauder A. (VAW)
CH	UNTERER GRINDELWALD	443	20160826	20170921	a	-16	Bauder A. (VAW)
CH	VALLEGGIA	467	20150930	20160914	t	-9	Soldati M. (TI-Forest)
CH	VALLEGGIA	467	20160914	20170924	t	-17	Soldati M. (TI-Forest)
CH	VALSOREY	365	20151019	20160812	t	-8	Medico J. (VS-Forest)
CH	VALSOREY	365	20160812	20171017	t	-46	Medico J. (VS-Forest)
CH	VERSTANKLA	409	20150828	20160909	t	-14	Oertig D. (GR-Forest)
CH	VERSTANKLA	409	20160909	20170908	t	-14	Ebneter P. (GR-Forest)
CH	VORAB	413	20151009	20160914	t	-10	Deflorin R. (GR-Forest)
CH	VORAB	413	20160914	20171015	t	-5	Deflorin R. (GR-Forest)
CH	WALLENBUR	428	20150929	20161007	t	-13	Kläger P. (UR-Forest)
CH	WALLENBUR	428	20161007	20170929	t	-18	Kläger P. (UR-Forest)
CH	ZINAL	382	20151012	20160922	t	-8	Chevalier G. (VS-Forest)
CH	ZINAL	382	20160922	20170928	t	-10	Chevalier G. (VS-Forest)

PU	GLACIER_NAME	WGMS_ID	FROM	TO	METHOD	FV	INVESTIGATORS_(SPONS_AGENCY)
CN - China							
CN	PARLUNG NO. 94	3987			tG	-X	Yang W. (CAS/ITPR), Li S. (CAS/ITPR)
CN	URUMQI GLACIER NO. 1	853	20150828	20160901	tG	-7	Wang P. (CAREERI), Xu C. (CAREERI)
CN	URUMQI GLACIER NO. 1	853	20160901	20170826	tG	8	Wang P. (CAREERI), Xu C. (CAREERI)
CN	URUMQI GLACIER NO. 1 E-BRANCH	1511	20150828	20160901	tG	-6	Wang P. (CAREERI), Xu C. (CAREERI)
CN	URUMQI GLACIER NO. 1 E-BRANCH	1511	20160901	20170826	tG	8	Wang P. (CAREERI), Xu C. (CAREERI)
CN	URUMQI GLACIER NO. 1 W-BRANCH	1512	20150828	20160901	tG	-7	Wang P. (CAREERI), Xu C. (CAREERI)
CN	URUMQI GLACIER NO. 1 W-BRANCH	1512	20160901	20170826	tG	5	
CO - Colombia							
CO	CONEJERAS	2721	20140499	20161130	tG	-33	Ceballos Lievano J. (IDEAM), Rojas F. (IDEAM)
CO	CONEJERAS	2721	20170122	20180131	tG	-22	Ceballos Lievano J. (IDEAM), Ospina A. (IDEAM)
CO	RITACUBA BLANCO	2763	20151130	20161130	tM	0	Ceballos Lievano J. (IDEAM), Cuéllar I. (IDEAM)
EC - Ecuador							
EC	ANTIZANA15ALPHA	1624	19940601	20161227	tC	-244	Cáceres Correa B. (INAMHI)
EC	ANTIZANA15ALPHA	1624	19940601	20180104	tC	-242	Cáceres Correa B. (INAMHI)
ES - Spain							
ES	MALADETA	942	20151023	20160928	tG	0	Cobos G. (UPV)
FR - France							
FR	ARGENTIERE	354	20150915	20160908		-15	Six D. (IGE), Thibert E. (IGE)
FR	ARGENTIERE	354	20160908	20170907		-31	Six D. (IGE), Vincent C. (IGE)
FR	BLANC	351	20150930	20160929		-18	Thibert E. (IRSTEA)
FR	BLANC	351	20160929	20170913		-44	Thibert E. (IRSTEA)
FR	BOSSONS	355	20150909	20160909		-8	Six D. (IGE), Vincent C. (IGE)
FR	MER DE GLACE	353	20150915	20160907		-10	Six D. (IGE), Vincent C. (IGE)
FR	MER DE GLACE	353	20160907	20170905		-34	Six D. (IGE), Vincent C. (IGE)
FR	OSSOUE	2867	20151015	20161009	tG	-7	René P. (AM)
FR	OSSOUE	2867	20161009	20171008	cC	-4	René P. (AM)
FR	SAINT SORLIN	356	20150824	20160825		-16	Six D. (IGE), Vincent C. (IGE)
FR	TRE LA TETE	1314	20159999	20169999		0	Moreau L. (GLACIOLAB)
GL - Greenland							
GL	HOLM LAND OUTLET 1	10461	19789999	20160826	cP	-20	von Albedyll L. (GIUZ)
GL	HOLM LAND OUTLET 10	10470	19789999	20160826	cP	-1870	von Albedyll L. (GIUZ)
GL	HOLM LAND OUTLET 2	10462	19789999	20160826	cP	60	von Albedyll L. (GIUZ)
GL	HOLM LAND OUTLET 3	10463	19789999	20160826	cP	-630	von Albedyll L. (GIUZ)
GL	HOLM LAND OUTLET 4	10464	19789999	20160826	cP	-90	von Albedyll L. (GIUZ)
GL	HOLM LAND OUTLET 5	10465	19789999	20160826	cP	-230	von Albedyll L. (GIUZ)
GL	HOLM LAND OUTLET 6	10466	19789999	20160826	cP	0	von Albedyll L. (GIUZ)
GL	HOLM LAND OUTLET 7	10467	19789999	20160826	cP	0	von Albedyll L. (GIUZ)
GL	HOLM LAND OUTLET 8	10468	19789999	20160826	cP	-130	von Albedyll L. (GIUZ)
GL	HOLM LAND OUTLET 9	10469	19789999	20160826	cP	-5	von Albedyll L. (GIUZ)
IS - Iceland							
IS	BLAGNIPUJOKULL	3130	20141103	20180105	tG	-127	Gíslason P. (IGS-IMO)
IS	FALLJOKULL	3071	20151027	20161028	tG	0	Þorláksdóttir S. (IGS-IMO)
IS	FALLJOKULL	3071	20161028	20180330	tG	15	Þorláksdóttir S. (IGS-IMO)
IS	FLAAJOKULL	3078	20151015	20161021	tG	-11	Pálsson B. (IGS-IMO)
IS	FLAAJOKULL	3078	20161021	20171015	tG	-30	Pálsson B. (IGS-IMO)
IS	FLAAJOKULL E 148	3076	20151023	20161016	tG	-107	Pálsson B. (IGS-IMO)
IS	FLAAJOKULL E 148	3076	20161016	20171015	tG	-47	Pálsson B. (IGS-IMO)
IS	GEITLANDSJOKULL	3128	20150906	20160903	tG	-26	Kristinsson B. (IGS-IMO)
IS	GEITLANDSJOKULL	3128	20160903	20170902	tG	-54	Kristinsson B. (IGS-IMO)
IS	HAGAFELLSJOKULL E	3081	20131013	20161008	tG	-342	Sigurðsson E. (IGS-IMO)
IS	HAGAFELLSJOKULL E	3081	20161008	20171014	tG	-113	Sigurðsson E. (IGS-IMO)
IS	HAGAFELLSJOKULL W	3082	20151018	20161016	tG	-56	Sigurðsson E. (IGS-IMO)
IS	HAGAFELLSJOKULL W	3082	20161016	20170930	tG	-80	Sigurðsson E. (IGS-IMO)
IS	HEINABERGSJOKULL	3085	20151125	20161104	tG	-X	Guðmundsson E. (IGS-IMO)
IS	HEINABERGSJOKULL H	3084	20151125	20161104	tG	-X	Guðmundsson E. (IGS-IMO)
IS	HEINABERGSJOKULL H	3084	20151125	20171108	tG	41	Guðmundsson E. (IGS-IMO)
IS	HYRNINGSJOKULL	3092	20150917	20160901	tG	SN	Haraldsson H. (IGS-IMO)
IS	HYRNINGSJOKULL	3092	20140903	20170906	tG	-40	Haraldsson H. (IGS-IMO)
IS	JOKULHALS	3093	20150917	20160901	tG	SN	Haraldsson H. (IGS-IMO)
IS	JOKULHALS	3093	20160901	20170906	tG	SN	Haraldsson H. (IGS-IMO)
IS	KALDALONSJOKULL	3095	20120905	20160917	tG	6	Matthíasson V. (IGS-IMO)
IS	KALDALONSJOKULL	3095	20160917	20170923	tG	-184	Matthíasson V. (IGS-IMO)
IS	LAMBAHRAUNSJOKULL	3099	20140907	20160903	tG	16	Kárason V. (IGS-IMO)
IS	LEIRUFJARDARJOKULL	3102	20130927	20161007	tG	-22	Sólbergsson Á. (IGS-IMO)
IS	MORSARJOKULL	3104	20150907	20161105	tG	-63	Kristjánsson R. (IGS-IMO)
IS	MORSARJOKULL	3104	20161105	20170916	tG	-2	Kristjánsson R. (IGS-IMO)
IS	MULAJOKULL S	3105	20150926	20160924	tG	-5	Jónsson L. (IGS-IMO)
IS	MULAJOKULL S	3105	20160924	20171014	tG	-29	Jónsson L. (IGS-IMO)
IS	MULAJOKULL W	3106	20150926	20160924	tG	15	Jónsson L. (IGS-IMO)
IS	MULAJOKULL W	3106	20160924	20171014	tG	-55	Jónsson L. (IGS-IMO)
IS	NAUTHAGAJOKULL	3107	20150926	20160924	tG	-28	Jónsson L. (IGS-IMO)
IS	NAUTHAGAJOKULL	3107	20160924	20171014	tG	-6	Jónsson L. (IGS-IMO)
IS	REYKJAFJARDARJOKULL	3109	20150919	20161016	tG	-24	Jóhannesson Þ. (IGS-IMO)
IS	REYKJAFJARDARJOKULL	3109	20161016	20171005	tG	-25	Jóhannesson Þ. (IGS-IMO)
IS	RJUPNABREKKUJOKULL	3136	20150912	20160924	tG	SN	Sigurðsson S. (IGS-IMO)
IS	RJUPNABREKKUJOKULL	3136	20150912	20170901	tG	-69	Sigurðsson S. (IGS-IMO)
IS	SATUJOKULL	3110	20150927	20160903	tG	-16	Kárason V. (IGS-IMO)
IS	SIDUJOKULL E M 177	3112	20030912	20160806	tG	-966	Pálsson H. (IGS-IMO)
IS	SKAFTAFELLSJOKULL	3113	20151026	20161028	tG	-45	Þorláksdóttir S. (IGS-IMO)
IS	SKAFTAFELLSJOKULL	3113	20161028	20180329	tG	-5	Þorláksdóttir S. (IGS-IMO)
IS	SKEIDARARJOKULL E1	3116	20150907	20161106	tG	-9	Kristjánsson R. (IGS-IMO)
IS	SKEIDARARJOKULL E1	3116	20161106	20171017	tG	14	Kristjánsson R. (IGS-IMO)
IS	SKEIDARARJOKULL E2	3117	20150907	20161106	tG	-67	Kristjánsson R. (IGS-IMO)
IS	SKEIDARARJOKULL E2	3117	20161106	20171017	tG	70	Kristjánsson R. (IGS-IMO)
IS	SKEIDARARJOKULL E3	3118	20151017	20161105	tG	-25	Kristjánsson R. (IGS-IMO)
IS	SKEIDARARJOKULL E3	3118	20161105	20171016	tG	-104	Kristjánsson R. (IGS-IMO)
IS	SLETTJOKULL	3133	20131013	20160918	tG	-81	Kaldal I. (IGS-IMO)
IS	SLETTJOKULL	3133	20160918	20171012	tG	-67	Kaldal I. (IGS-IMO)
IS	SOLHEIMAJOKULL W	3122	20151017	20161022	tG	-63	Gunnlaugsson E. (IGS-IMO)

PU	GLACIER_NAME	WGMS_ID	FROM	TO	METHOD	FV	INVESTIGATORS_(SPONS_AGENCY)
IS	SOLHEIMAJOKULL W	3122	20161022	20171022	tG	-44	Gunnlaugsson E. (IGS-IMO)
IS	SVINAFELLSJOKULL	3124	20151026	20161030	tG	-45	Þorláksdóttir S. (IGS-IMO)
IS	SVINAFELLSJOKULL	3124	20161030	20180402	tG	-30	Þorláksdóttir S. (IGS-IMO)
IS	TUNGNAARJOKULL	3126	20151003	20161202	tG	-91	Hilmarsson S. (IGS-IMO)
IS	TUNGNAARJOKULL	3126	20161202	20171104	tG	-35	Hilmarsson S. (IGS-IMO)
IT - Italy							
IT	AGNELLO MER.	684	20150826	20160908	tG	-1	Tron M. (CGI)
IT	ALTA (VEDRETTA) / HOHENF.	632	20150828	20160822	tG	-13	Perini G. (CGI), Benetton S. (CGI)
IT	ALTA (VEDRETTA) / HOHENF.	632	20160822	20170824	tG	-18	Perini G. (CGI), Benetton S. (CGI)
IT	AMOLA	638	20130901	20160826	tG	-15	Marchetti F. (SAT), Piffer A. (SAT)
IT	ANTELAO INFERIORE (OCC.)	642	20120928	20160823	tG	-5	Perini G. (CGI), Benetton S. (CGI)
IT	ANTELAO INFERIORE (OCC.)	642	20160823	20170817	tG	-1	Perini G. (CGI)
IT	ANTELAO SUP.	643	20150812	20160823	tG	-8	Perini G. (CGI), Benetton S. (CGI)
IT	ANTELAO SUP.	643	20160823	20170817	tG	-43	Perini G. (CGI), Benetton S. (CGI)
IT	AOUILLE	1239	20150921	20160914	tG	-5	Nicolino M. (CGI), Chevrère R. (CGI)
IT	AOUILLE	1239	20160914	20170907	tG	-31	Nicolino M. (CGI), Chevrère R. (CGI)
IT	ARGUEREY MER.	1253	20150827	20160906	tG	0	Nigrelli G. (CGI), Chiarle M. (CGI)
IT	ARGUEREY MER.	1253	20160906	20170822	tG	-11	Nigrelli G. (CGI), Chiarle M. (CGI)
IT	ARGUEREY SETT.	1254	20150827	20160906	tG	-2	Nigrelli G. (CGI), Chiarle M. (CGI)
IT	ARGUEREY SETT.	1254	20160906	20170822	tG	-16	
IT	BARBADORSO DI DENTRO / BAEREN-BARTF. INNERER	658	20130908	20160925	tG	-71	Scaltriti A. (SGAA)
IT	BASEI	611	20150828	20160901	tG	-2	Fornengo F. (CGI), Fornengo M. (CGI)
IT	BASEI	611	20160901	20170830	tG	-5	Mercalli L. (CGI), Fornengo F. (CGI), Fornengo M. (CGI)
IT	BASSA DELL' ORTLES / ORTLERF. NIEDERER	1128	20150804	20160823	tG	-16	Barison G. (SGAA), Sampieri R. (SGAA)
IT	BASSA DELL' ORTLES / ORTLERF. NIEDERER	1128	20160823	20170820	tG	-18	Barison G. (SGAA), Sartori G. (SGAA), Rosa S. (SGAA), Rosan R. (SGAA)
IT	BELVEDERE (MACUGNAGA)	618	20150925	20160924	tG	-26	Tamburini A. (CGI), Versaci S. (CGI), Bettoni M. (CGI), Mortara G. (CGI)
IT	BELVEDERE (MACUGNAGA)	618	20160924	20171016	tG	-43	Tamburini A. (CGI), Versaci S. (CGI), Alberto W. (CGI), Mortara G. (CGI)
IT	BERTA	1295	20150826	20160907	tG	-X	Rogliardo F. (CGI)
IT	BERTA	1295	20150826	20170829	tG	0	Rogliardo F. (CGI)
IT	BESSANESE	1297	20150915	20170907	tG	-11	Rogliardo F. (CGI)
IT	BORS	2453	20150831	20170821	tG	-27	Piccini P. (CGI)
IT	BREUIL SETT.	1256	20150821	20160902	tG	-2	Nigrelli G. (CGI), Chiarle M. (CGI)
IT	BREUIL SETT.	1256	20160902	20170829	tG	-12	Nigrelli G. (CGI), Chiarle M. (CGI)
IT	BROGLIO	2375	20151012	20170821	tG	0	Miravalle R. (CGI)
IT	CALDERONE	1107	20150912	20160915	tP	0	Caira T. (ITAC), Cappelletti D. (CGI; University of Perugia-DCBB), d'Aquila P. (CNSAS), Esposito G. (CNR), Pecci Massimo (CGI; PCM-DARA), Pecci Mattia (ITAC)
IT	CALDERONE	1107	20160915	20170909	tP	0	Caira T. (ITAC), Cappelletti D. (CGI; University of Perugia-DCBB), d'Aquila P. (CNSAS), Esposito G. (CNR), Pecci Massimo (CGI; PCM-DARA), Pecci Mattia (ITAC)
IT	CAPRA	1304	20150817	20160917	tG	-4	Bertoglio V. (CGI), Cerrato C. (CGI)
IT	CAPRA	1304	20160917	20170829	tG	-6	Bertoglio V. (CGI), Cerrato C. (CGI)
IT	CARRO OCCIDENT.	2358	20150821	20160829	tG	-1	Bertoglio V. (CGI), Vergnano G. (CGI)
IT	CARRO OCCIDENT.	2358	20160829	20170907	tG	-8	Bertoglio V. (CGI), Vergnano G. (CGI)
IT	CASPOGGIO	628	20150920	20160920	tG	-8	Alberti S. (SGAA)
IT	CASPOGGIO	628	20160920	20170923	tG	-7	Alberti S. (SGAA)
IT	CASSANDRA OR.	1185	20150930	20160910	tG	-3	De Zaiacomo M. (SGL)
IT	CASSANDRA OR.	1185	20160910	20171101	tG	-24	De Zaiacomo M. (SGL)
IT	CEDEC	1165	20151001	20160904	tG	-28	Colombarolli D. (SGL)
IT	CEDEC	1165	20160904	20170913	tG	-19	Colombarolli D. (SGL)
IT	CEVEDALE FORCOLA / FUERKELEF.	663	20150828	20160822	tG	-17	Perini G. (CGI), Benetton S. (SGAA)
IT	CEVEDALE FORCOLA / FUERKELEF.	663	20160822	20170824	tG	-30	Perini G. (CGI), Benetton S. (SGAA)
IT	CEVEDALE PRINCIPALE / ZUFALLF.	662	20150828	20160822	tG	-21	Perini G. (CGI), Benetton S. (SGAA)
IT	CEVEDALE PRINCIPALE / ZUFALLF.	662	20160822	20170824	tG	-116	Perini G. (CGI), Benetton S. (SGAA)
IT	CHATEAU BLANC	1251	20150827	20170822	tG	-4	Perona S. (CGI)
IT	CIAMARELLA	1298	20150920	20170905	tG	-117	Rogliardo F. (CGI)
IT	CIARDONEY	1264	20150915	20160913	tG	-18	Mercalli L. (SMI), Cat Berro D. (SMI), Fornengo F. (SMI)
IT	CIARDONEY	1264	20160913	20170906	tG	-13	Mercalli L. (SMI), Cat Berro D. (SMI), Fornengo F. (SMI)
IT	COUPE DE MONEY	1271	20150924	20160910	tG	-7	Bertoglio V. (CGI), Borre P. (CGI)
IT	COUPE DE MONEY	1271	20160910	20170906	tG	-11	Bertoglio V. (CGI), Borre P. (CGI)
IT	CRODA ROSSA / ROTWANDF.	654	20150928	20160908	tG	-4	Benetton S. (CGI), . (), Benetton G. (CGI)
IT	CRODA ROSSA / ROTWANDF.	654	20160908	20170904	tG	-8	Benetton S. (CGI), Benetton G. (CGI)
IT	DISGRAZIA	2503	20150912	20160910	tG	-36	Neri G. (SGL)
IT	DOSDE OR.	625	20150913	20160917	tG	-14	Toffaletti A. (SGAA)
IT	DOSDE OR.	625	20160917	20170930	tG	-37	Toffaletti A. (SGAA)
IT	DOSEGU	668	20150920	20160902	tG	-18	Borghi A. (SGL)
IT	DOSEGU	668	20160902	20170924	tG	-33	Borghi A. (SGL)
IT	DZASSET	2372	20150925	20160911	tG	-4	Bertoglio V. (CGI), Borre P. (CGI), Gerard Y. (CGI)
IT	DZASSET	2372	20160911	20170907	tG	-4	Bertoglio V. (CGI), Borre P. (CGI)
IT	ENTRELOR SETT.	2377	20150909	20170827	tG	-9	Rossotto A. (CGI)
IT	FOND OCCID.	2380	20150907	20160907	tG	-8	Pollicini F. (CGI), Borney S. (CGI)
IT	FOND OCCID.	2380	20160907	20170822	tG	-13	Pollicini F. (CGI), Borney S. (CGI)
IT	FOND OR.	1243	20150907	20160907	tG	-9	Pollicini F. (CGI), Borney S. (CGI)
IT	FOND OR.	1243	20160907	20170822	tG	-49	Pollicini F. (CGI), Borney S. (CGI)
IT	FONTANA BIANCA / WEISSBRUNNF.	1507	20150829	20160904	tG	-3	Barison G. (SGAA), Sartori G. (SGAA)
IT	FONTANA BIANCA / WEISSBRUNNF.	1507	20160904	20171013	tG	-5	Barison G. (SGAA), Sartori G. (SGAA)
IT	FORNI CENTRALE	670	20150928	20161002	tG	-68	Cola G. (SGL)
IT	FORNI CENTRALE	670	20161002	20170927	tG	-45	Cola G. (SGL)
IT	FORNI OCCIDENTALE	10420	20150928	20161002	tG	-9	Cola G. (SGL)
IT	FORNI OCCIDENTALE	10420	20161002	20170927	tG	-14	Cola G. (SGL)
IT	FORNI ORIENTALE	10421	20161002	20170927	tG	-17	
IT	FRANE (VEDR. DELLE) / STEINSCHLAGF.	2624	20150831	20160908	tG	-3	Greco G. (SGAA), La Pera L. (SGAA)
IT	GLIAIRETTA VAUDET	1248	20150822	20160903	tG	-10	Pollicini F. (CGI)
IT	GLIAIRETTA VAUDET	1248	20160903	20170907	tG	-15	Pollicini F. (CGI)
IT	GOLETTA	683	20150920	20160924	tG	-6	Pollicini F. (CGI), Borney S. (CGI), Jordaney J. (CGI)
IT	GOLETTA	683	20160924	20170917	tG	-13	Pollicini F. (CGI), Borney S. (CGI)
IT	GRAMES ORIENT. + CENTR. / GRAMSENF. OESTL. + ZENTR.	2599	20150907	20160902	tG	-18	Bruschi P. (SGAA)
IT	GRAMES ORIENT. + CENTR. / GRAMSENF. OESTL. + ZENTR.	2599	20160902	20170826	tG	-15	Bruschi P. (SGAA)
IT	GRAN NEYRON	1283	20150904	20160920	tG	-5	Vallet V. (CGI)
IT	GRAN NEYRON	1283	20160920	20170917	tG	-14	Vallet V. (CGI)
IT	GRAN PARADISO	1235	20160905	20170919	tG	0	Bertoglio V. (CGI), Borre P. (CGI), Massoni D. (CGI), Vallet R. (CGI)
IT	GRAN PILASTRO (GHIAC. DEL) / GLIEDERF.	652	20150912	20160824	tG	-19	Bertinotti I. (SGAA)
IT	GRAN PILASTRO (GHIAC. DEL) / GLIEDERF.	652	20160824	20170823	tG	-55	Bertinotti I. (SGAA)
IT	GRAN VEDRETTA OCC. / HOCHF.	2634	20150915	20160914	tG	-26	Bertinotti I. (SGAA)
IT	GRAN VEDRETTA OR. / GRIESSF.	2633	20150915	20160914	tG	-11	Bertinotti I. (SGAA)

PU	GLACIER_NAME	WGMS_ID	FROM	TO	METHOD	FV	INVESTIGATORS_(SPONS_AGENCY)
IT	GRAN VEDRETTA OR. / GRIESSF.	2633	20160914	20170818	tG	-7	Bertinotti I. (SGAA)
IT	GRAN ZEBRU (CENTRALE)	1164	20151001	20160904	tG	-5	Colombarolli D. (SGL)
IT	GRAN ZEBRU (CENTRALE)	1164	20160904	20170913	tG	-16	Colombarolli D. (SGL)
IT	GRAND CROUX CENTR.	1273	20140914	20160919	tG	-10	Bertoglio V. (CGI), Borre P. (CGI)
IT	GRAND CROUX CENTR.	1273	20160919	20171011	tG	-4	Bertoglio V. (CGI), Borre P. (CGI)
IT	GRAND ETRET	1238	20150919	20160904	tG	-15	Bertoglio V. (CGI)
IT	GRUETTA ORIENT.	2418	20150920	20160925	tG	-7	Gadin G. (CGI)
IT	GRUETTA ORIENT.	2418	20160925	20170815	tG	-9	Gadin G. (CGI)
IT	HOHSAND SETT. (SABBIONE SETT.)	631	20150827	20160903	tG	-2	Ossola R. (CGI)
IT	INDREN OCC.	1209	20150920	20160903	tG	-4	Piccini P. (CGI)
IT	INDREN OCC.	1209	20160903	20170928	tG	-10	Piccini P. (CGI)
IT	LA MARE (VEDRETTA DE)	636	20150831	20160910	tG	-15	Carturan L. (CGI), Voltolini C. (CGI)
IT	LA MARE (VEDRETTA DE)	636	20160910	20170824	tG	-12	Carturan L. (CGI), Voltolini C. (CGI)
IT	LAGAUN (Vedretta di) / LAGAUN FERNER	6823	20150912	20160927	tG	0	Seppi R. (SGAA), Sampieri R. (SGAA)
IT	LANA (VEDR. DI) / AEUSSERES LAHNER KEES	650	20150812	20160907	tG	-10	Mattiato M. (SGAA)
IT	LANA (VEDR. DI) / AEUSSERES LAHNER KEES	650	20160907	20170814	tG	-14	Mattiato M. (SGAA), Covi S. (SGAA)
IT	LAUSON	1275	20150910	20170825	tG	-26	Grosa M. (CGI)
IT	LAVACCIU	1285	20150909	20160920	tG	-48	Bertoglio V. (CGI), Borre P. (CGI), Massoni D. (CGI), Nicolussi S. (CGI)
IT	LAVACCIU	1285	20160920	20170922	tG	-32	Cerise S. (CGI), Nicolussi S. (CGI)
IT	LAVASSEY	1242	20150907	20160907	tG	-28	Pollicini F. (CGI), Borney S. (CGI)
IT	LAVASSEY	1242	20160907	20170822	tG	-14	Pollicini F. (CGI), Borney S. (CGI)
IT	LOBBIA	1150	20130901	20160911	tG	-66	Ferrari C. (SAT), Marchetti F. (SAT)
IT	LOBBIA	1150	20160911	20170911	tG	-11	Ferrari C. (SAT)
IT	LUNGA (VEDRETTA) / LANGENF.	661	20150827	20160821	tG	-31	Perini G. (CGI), Benetton S. (SGAA)
IT	LUNGA (VEDRETTA) / LANGENF.	661	20160821	20170823	tG	-47	Perini G. (CGI), Benetton S. (SGAA)
IT	LUPO	1138	20130928	20160918	tG	-2	Scotti R. (SGL)
IT	LUPO	1138	20160918	20171008	tG	-4	Scotti R. (SGL)
IT	LYS	620	20151008	20161007	tG	-14	Freppaz M. (CGI)
IT	LYS	620	20161007	20171018	tG	-15	Freppaz M. (CGI)
IT	MADACCIO (VEDR. DEL) / MADATSCHF.	1129	20150804	20160823	tG	-19	Seppi R. (SGAA)
IT	MADACCIO (VEDR. DEL) / MADATSCHF.	1129	20160823	20170824	tG	-38	Sartori G. (SGAA), Seppi R. (SGAA), Montesani G. (SGAA)
IT	MALAVALLE (VEDR. DI) / UEBELTALF.	672	20150927	20160914	tG	-10	Franchi G. (CGI)
IT	MALAVALLE (VEDR. DI) / UEBELTALF.	672	20160914	20170927	tG	-16	Franchi G. (CGI)
IT	MARMOLADA CENTR.	676	20150909	20160827	tG	-16	Varotto M. (CGI), Ferrarese F. (CGI)
IT	MARMOLADA CENTR.	676	20160827	20171015	tG	0	Ferrari C. (SAT)
IT	MAROVIN	2547	20130912	20160928	tG	-3	Butti M. (SGL), Scotti R. (SGL)
IT	MAROVIN	2547	20160928	20171007	tG	-37	Scotti R. (SGL)
IT	MARTELOT	1301	20150822	20170814	tG	-1	Rogliardo F. (CGI)
IT	MAZIA (VEDR. DI) / MATSCHERF.	2620	20150921	20160829	tG	-8	Greco G. (SGAA), Tosi P. (SGAA)
IT	MONCIAIR	1237	20150920	20170918	tG	-63	Bertoglio V. (CGI), Massoni D. (CGI), Vallet R. (CGI)
IT	MONCORVE	1236	20150920	20160905	tG	-1	Bertoglio V. (CGI), Borre P. (CGI), Massoni D. (CGI), Vallet R. (CGI)
IT	MONCORVE	1236	20160905	20170918	tG	-4	Bertoglio V. (CGI), Borre P. (CGI), Massoni D. (CGI), Vallet R. (CGI)
IT	MONEY	1272	20150924	20160910	tG	-25	Bertoglio V. (CGI), Borre P. (CGI), Vergnano G. (CGI)
IT	MONEY	1272	20160910	20170908	tG	-5	Bertoglio V. (CGI), Borre P. (CGI)
IT	MONTANDEYNE	1284	20150908	20160909	tG	-13	Nicolussi S. (CGI)
IT	MONTANDEYNE	1284	20160909	20170921	tG	-4	Nicolussi S. (CGI)
IT	MONTARSO (VEDR. DI) / FEUERSTEINF.	2631	20150901	20160906	tG	-7	Bertinotti I. (SGAA)
IT	NARDIS OCC.	639	20090905	20160827	tG	-24	Marchetti F. (SAT), Piffer A. (SAT)
IT	NEL CENTRALE	1303	20150828	20160826	tG	-1	Bertoglio V. (CGI), Vergnano G. (CGI)
IT	NEL CENTRALE	1303	20160826	20170824	tG	-5	Bertoglio V. (CGI), Miravalle R. (CGI)
IT	NEVES OR. (GHIAC. DI) / NOEFESF. OESTL.	651	20150921	20160823	tG	-4	Franchi G. (CGI)
IT	NEVES OR. (GHIAC. DI) / NOEFESF. OESTL.	651	20160823	20171013	tG	-33	Franchi G. (CGI)
IT	NOASCHETTA OCCID.	2359	20150927	20160925	tG	0	Caminada C. (CGI), Permulian R. (CGI)
IT	NOASCHETTA OCCID.	2359	20160925	20170822	tG	-3	Permulian R. (CGI), Naudin A. (CGI)
IT	PALON DELLA MARE LOBO CENTR.	2533	20151012	20160904	tG	-5	Farinella L. (SGL)
IT	PALON DELLA MARE LOBO CENTR.	2533	20160904	20170913	tG	-19	Farinella L. (SGL)
IT	PALON DELLA MARE LOBO OR.	2534	20151012	20160904	tG	-11	
IT	PALON DELLA MARE LOBO OR.	2534	20160904	20170913	tG	-9	
IT	PENDENTE (VEDR.) / HANGENDERF.	675	20150927	20160915	tG	-23	Franchi G. (CGI)
IT	PENDENTE (VEDR.) / HANGENDERF.	675	20160915	20170927	tG	-12	Franchi G. (CGI)
IT	PERCIA	1240	20150915	20160914	tG	-7	Nicolino M. (CGI), Chevrère R. (CGI)
IT	PERCIA	1240	20160914	20170912	tG	-9	Nicolino M. (CGI), Chevrère R. (CGI)
IT	PIODE	619	20151109	20171007	tG	-26	Piccini P. (CGI)
IT	PIZZO FERRE	1181	20150918	20160923	tG	-19	Pironi L. (SGL)
IT	PIZZO FERRE	1181	20160923	20170930	tG	-13	Pironi L. (SGL)
IT	PIZZO SCALINO	1187	20150921	20160919	tG	-16	Butti M. (SGL)
IT	PLANOL (VEDR. DI) / PLANAILF.	2619	20121003	20160922	tG	-154	Benetton S. (SGAA), Benetton G. (SGAA)
IT	PLANOL (VEDR. DI) / PLANAILF.	2619	20160922	20170906	tG	-5	Benetton S. (SGAA), Benetton G. (SGAA)
IT	PREDAROSSA	1182	20150906	20160910	tG	-6	Urso M. (SGL)
IT	PREDAROSSA	1182	20160910	20171008	tG	-17	Urso M. (SGL)
IT	QUAIRA BIANCA (VEDR. DELLA) / WEISSKARF.	686	20150912	20160822	tG	-13	Bertinotti I. (SGAA)
IT	QUAIRA BIANCA (VEDR. DELLA) / WEISSKARF.	686	20160822	20170823	tG	-2	Bertinotti I. (SGAA)
IT	ROCCIA VIVA	2364	20150925	20160929	tG	-6	Caminada C. (CGI), Permulian R. (CGI)
IT	ROCCIA VIVA	2364	20160929	20171009	tG	-15	Caminada C. (CGI), Permulian R. (CGI)
IT	ROSIM (VEDR. DI) / ROSIMF.	610	20150827	20160820	tG	-12	Barison G. (SGAA), Sampieri R. (SGAA)
IT	ROSIM (VEDR. DI) / ROSIMF.	610	20160820	20170823	tG	-9	Barison G. (SGAA), Sampieri R. (SGAA)
IT	ROSSO DESTRO	648	20150909	20160811	tG	-8	Mattiato M. (CGI), Moreschi G. (CGI), Perotti G. (CGI)
IT	ROSSO DESTRO	648	20160811	20170817	tG	-148	Mattiato M. (CGI), Covi S. (CGI)
IT	RUTOR	612	20150906	20160917	tG	-14	Garino R. (CGI)
IT	RUTOR	612	20160917	20170729	tG	-3	Garino R. (CGI)
IT	SALDURA MER. (VEDR. DI) / SALDUR F. SUEDL.	1131	20150907	20160813	tG	0	Greco G. (SGAA)
IT	SALDURA MER. (VEDR. DI) / SALDUR F. SUEDL.	1131	20160813	20170813	tG	-82	Greco G. (SGAA), Le Pera L. (SGAA)
IT	SCERSCEN INFERIORE	1186	20151009	20160923	tG	-8	Salvetti A. (SGL)
IT	SCERSCEN INFERIORE	1186	20160923	20170929	tG	-14	Salvetti A. (SGL)
IT	SEA	1299	20150909	20170824	tG	-33	Rogliardo F. (CGI)
IT	SENGIE SETT.	1267	20150906	20160925	tG	-10	Bertoglio V. (CGI), Borre P. (CGI)
IT	SENGIE SETT.	1267	20160925	20170921	tG	-2	Borre P. (CGI), Caminada C. (CGI)
IT	SERANA (VEDR.) / SCHRANF.	634	20150908	20160908	tG	-10	Bruschi P. (SGAA)
IT	SESIA	1210	20151109	20171007	tG	-32	Piccini P. (CGI)
IT	SFORZELLINA	667	20150822	20160910	tG	-2	Smiraglia C. (CGI)
IT	SFORZELLINA	667	20160910	20170830	tG	-2	Smiraglia C. (CGI)

PU	GLACIER_NAME	WGMS_ID	FROM	TO	METHOD	FV	INVESTIGATORS_(SPONS_AGENCY)
IT	SISSONE	2506	20150829	20160827	tG	-33	Almasio A. (SGL)
IT	SOCHES TSANTELEINA	1244	20150907	20160911	tG	-2	Pollicini F. (CGI), Borney S. (CGI)
IT	SOCHES TSANTELEINA	1244	20160911	20170822	tG	-19	Pollicini F. (CGI), Borney S. (CGI)
IT	SOLDA (VEDRETTA DI) / SULDENF.	660	20150827	20160820	tG	-9	Sartori G. (SGAA), Seppi R. (SGAA)
IT	SOLDA (VEDRETTA DI) / SULDENF.	660	20160820	20170823	tG	-16	Sartori G. (SGAA), Seppi R. (SGAA), Montesani G. (SGAA)
IT	SURETTA MERID.	2488	20130921	20160917	tG	-10	Villa F. (SGL)
IT	TESSA (VEDR. DI) / TEXELF.	653	20150928	20160908	tG	-9	Benetton S. (SGAA), Benetton G. (SGAA)
IT	TESSA (VEDR. DI) / TEXELF.	653	20160908	20170904	tG	-19	Benetton S. (SGAA), Benetton G. (SGAA)
IT	TIMORION	1282	20150915	20161031	tG	-6	Morra di Cella U. (ARPA), Diotri F. (ARPA), Pogliotti P. (ARPA)
IT	TIMORION	1282	20161031	20170922	tG	-10	Morra di Cella U. (ARPA), Diotri F. (ARPA), Pogliotti P. (ARPA)
IT	TORRENT	2384	20150820	20160821	tG	-12	Pollicini F. (CGI)
IT	TORRENT	2384	20160821	20170818	tG	-23	Pollicini F. (CGI)
IT	TRAFOI (VEDR. DI) / TRAFOIER F.	2617	20150804	20170820	tG	-131	Barison G. (SGAA), Sartori S. (SGAA), Rosa S. (SGAA), Rosan R. (SGAA)
IT	TRAJO	1278	20150910	20170923	tG	-69	Borre P. (CGI), Caminada C. (CGI), Frasca M. (CGI)
IT	TRIBOLAZIONE	1274	20150925	20160911	tG	-17	Bertoglio V. (CGI), Borre P. (CGI), Gerard Y. (CGI)
IT	TRIBOLAZIONE	1274	20160911	20170907	tG	-4	Bertoglio V. (CGI), Borre P. (CGI), Montis V. (CGI)
IT	ULTIMA (VEDR.) / ULTENMARKTF.	633	20150908	20160903	tG	-30	Bruschi P. (SGAA)
IT	ULTIMA (VEDR.) / ULTENMARKTF.	633	20160903	20170826	tG	-25	Bruschi P. (SGAA)
IT	VALEILLE	1268	20150905	20160924	tG	-26	Bertoglio V. (CGI), Borre P. (CGI)
IT	VALLELUNGA (VEDR. DI) / LANGTAU-FERERF.	659	20130908	20160925	tG	-181	Scaltriti A. (SGAA)
IT	VENEROCOLO	665	20151025	20160903	tG	-5	Pagliardi P. (SGL)
IT	VENTINA	629	20150927	20160925	tG	-37	Gussoni M. (SGAA)
IT	VENTINA	629	20160925	20170924	tG	-30	Gussoni M. (SGAA)
KG - Kyrgyzstan							
KG	ABRAMOV	732	20149999	20169999		-38	Azisov, E. (CAIAG)
KG	BATYSH SOOK/SYEK ZAPADNIY	781	20159999	20169999		-3	Azisov, E. (CAIAG)
KG	GLACIER NO. 354 (AKSHIYRAK)	3889	20159999	20169999		-76	Azisov, E. (CAIAG)
KG	GOLUBIN	753	20159999	20169999		-27	Azisov, E. (CAIAG)
KG	KARA-BATKAK	813	20150725	20160828	tG	-14	Popovnin V. (MGU), Satylkanov R. (TshMRC), Ermenbayev B. (TshMRC)
KG	KARA-BATKAK	813	20160828	20170916	tG	-11	Popovnin V. (MGU), Satylkanov R. (TshMRC), Ermenbayev B. (TshMRC)
KG	SARY TOR (NO.356)	805	20150906	20160828	tG	-12	Popovnin V. (MGU), Satylkanov R. (TshMRC), Ermenbayev B. (TshMRC)
KG	SARY TOR (NO.356)	805	20160828	20170905	tG	-30	Popovnin V. (MGU), Satylkanov R. (TshMRC), Ermenbayev B. (TshMRC)
KZ - Kazakhstan							
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	tG	-14	Kasatkin N. (IGNANKaz)
KZ	TS.TUYUKSUYSKIY	817	20160825	20170902	tG	-26	Kasatkin N. (IGNANKaz)
NO - Norway							
NO	AUSTERDALSBREEN	288	20150810	20160723	tG	-30	Elvehøy H. (NVE), Solnes P. (NVE)
NO	AUSTERDALSBREEN	288	20160723	20170810	tG	0	Elvehøy H. (NVE), Solnes P. (NVE)
NO	AUSTRE OKSTINDBREEN	3342	20150906	20160917	tG	-28	Elvehøy H. (NVE), Nesengmo K. (NVE)
NO	BLOMSTOELSKARDSBREEN	3339	20151016	20161004	tG	-6	Elvehøy H. (NVE), Probert J. (NVE)
NO	BLOMSTOELSKARDSBREEN	3339	20161004	20170926	tG	3	Elvehøy H. (NVE), Probert J. (NVE)
NO	BOEVERBREEN	2298	20131010	20161007	tG	12	Elvehøy H. (NVE), Bakke D. (NVE)
NO	BOEVERBREEN	2298	20161007	20171009	tG	-22	Elvehøy H. (NVE), Bakke D. (NVE)
NO	BONDHUSBREA	318	20151012	20161007	tG	2	Elvehøy H. (NVE), Knutsen G. (NVE)
NO	BONDHUSBREA	318	20161007	20171009	tG	-27	Elvehøy H. (NVE), Knutsen G. (NVE)
NO	BOTNABREA	2292	20130928	20161002	tG	-41	Elvehøy H. (NVE), Knutsen G. (NVE)
NO	BOTNABREA	2292	20161002	20170924	tG	-2	Elvehøy H. (NVE), Knutsen G. (NVE)
NO	BRENNDALSBREEN	2293	20151031	20161105	tG	-26	Elvehøy H. (NVE), Briksdal R. (NVE)
NO	BUERBREEN	315	20151008	20161106	tG	-31	Elvehøy H. (NVE), Buer M. (NVE)
NO	BUERBREEN	315	20161106	20171102	tG	0	Elvehøy H. (NVE), Buer M. (NVE)
NO	CORNELIUSSENBREEN	3341	20150906	20160917	tG	-14	Elvehøy H. (NVE), Nesengmo K. (NVE)
NO	ENGABREEN	298	20151027	20161011	tG	-8	Elvehøy H. (NVE)
NO	ENGABREEN	298	20161011	20171121	tG	-8	Elvehøy H. (NVE)
NO	FAABERGSTOELSBREEN	289	20150908	20161002	tG	-11	Elvehøy H. (NVE), Åsen K. (NVE)
NO	FAABERGSTOELSBREEN	289	20161002	20171012	tG	-27	Elvehøy H. (NVE), Åsen S. (NVE)
NO	GRAAFJELLSBREA	1320	20151014	20161019	tG	-117	Elvehøy H. (NVE), Knutsen G. (NVE)
NO	GRAAFJELLSBREA	1320	20161019	20171018	tG	-43	Elvehøy H. (NVE), Knutsen G. (NVE)
NO	HAUGABREEN	4568	20150929	20161013	tG	-15	Kielland P. (NVE)
NO	HAUGABREEN	4568	20161013	20171101	tG	-18	Kielland P. (NVE)
NO	HELLSTUGUBREEN	300	20150923	20160912	tG	-14	Andreassen L. (NVE)
NO	HELLSTUGUBREEN	300	20160912	20170919	tG	-10	Andreassen L. (NVE)
NO	JUVFONNE	3661	20140909	20160910	tG	3	Andreassen L. (NVE)
NO	JUVFONNE	3661	20160910	20170918	tG	-4	Andreassen L. (NVE)
NO	KOPPANGSBREEN	2309	20160813	20170906	tG	-32	Elvehøy H. (NVE), Skirnisson D. (NVE)
NO	LANGFJORDJOEKELEN	323	20150806	20160922	tG	-96	Elvehøy H. (NVE), Jackson M. (NVE)
NO	LANGFJORDJOEKELEN	323	20160922	20170929	tG	-14	Elvehøy H. (NVE), Kjøllmoen B. (NVE)
NO	LEIRBREEN	301	20151009	20161007	tG	-13	Elvehøy H. (NVE), Bakke D. (NVE)
NO	LEIRBREEN	301	20161007	20171010	tG	-20	Elvehøy H. (NVE), Bakke D. (NVE)
NO	MAARAADALSBREEN	4567	20140818	20160813	tG	-21	Elvehøy H. (NVE)
NO	MAARAADALSBREEN	4567	20160813	20170926	tG	-31	Elvehøy H. (NVE)
NO	MIDTDALSBREEN	2295	20150919	20160830	tG	-21	Nesje A. (NVE)
NO	MIDTDALSBREEN	2295	20160830	20170830	tG	-13	Nesje A. (NVE)
NO	NIGARDSBREEN	290	20150928	20160920	tG	-70	Elvehøy H. (NVE), Åsen K. (NVE)
NO	NIGARDSBREEN	290	20160920	20171016	tG	-54	Elvehøy H. (NVE), Åsen S. (NVE)
NO	REMBESDALSKAAKA	2296	20151014	20161025	tG	-5	Elvehøy H. (NVE)
NO	REMBESDALSKAAKA	2296	20161025	20171018	tG	-2	Elvehøy H. (NVE)
NO	RUNDVASSBREEN	2670	20140923	20160922	tG	-68	Elvehøy H. (NVE), Kjøllmoen B. (NVE)
NO	RUNDVASSBREEN	2670	20160922	20170927	tG	-9	Elvehøy H. (NVE), Kjøllmoen B. (NVE)
NO	SKJELAATINDBREEN	10424	20140830	20160910	tG	-20	Elvehøy H. (NVE), Karlsen J. (NVE)
NO	STEGHOLTBREEN	313	20151014	20161005	tG	-10	Elvehøy H. (NVE), Kvambekk Å. (NVE)
NO	STEGHOLTBREEN	313	20161005	20171018	tG	-17	Elvehøy H. (NVE), Aasen J. (NVE)
NO	STEINDALSBREEN	2310	20150822	20160814	tG	-19	Elvehøy H. (NVE), Skirnisson D. (NVE)
NO	STEINDALSBREEN	2310	20160814	20170907	tG	-6	Elvehøy H. (NVE), Skirnisson D. (NVE)
NO	STORBREEN	302	20140918	20160912	tG	-12	Andreassen L. (NVE)
NO	STORBREEN	302	20160912	20170927	tG	-6	Andreassen L. (NVE)
NO	STORJUVBREEN	2308	20150929	20160930	tG	-11	Elvehøy H. (NVE), Bakke D. (NVE)
NO	STORJUVBREEN	2308	20160930	20170923	tG	-12	Elvehøy H. (NVE), Bakke D. (NVE)
NO	STORSTEINSFJELLBREEN	1329	20151018	20160817	tG	-2	Elvehøy H. (NVE), Sommerseth J. (NVE)
NO	STORSTEINSFJELLBREEN	1329	20160817	20171011	tG	-5	Elvehøy H. (NVE), Sommerseth J. (NVE)
NO	STYGGEBREAN	4504	20141016	20160930	tG	-3	Elvehøy H. (NVE), Bakke D. (NVE)
NO	STYGGEBREAN	4504	20160930	20171008	tG	1	Elvehøy H. (NVE), Bakke D. (NVE)
NO	STYGGEDALSBREEN	303	20151013	20161004	tG	-6	Elvehøy H. (NVE), Kvambekk Å. (NVE)

PU	GLACIER_NAME	WGMS_ID	FROM	TO	METHOD	FV	INVESTIGATORS_(SPONS_AGENCY)
NO	STYGGEDALSBREEN	303	20161004	20171023	tG	2	Elvehøy H. (NVE), Aasen J. (NVE)
NO	SVELGJABREEN	3343	20151016	20161004	tG	-17	Elvehøy H. (NVE), Probert J. (NVE)
NO	SVELGJABREEN	3343	20161004	20170926	tG	3	Elvehøy H. (NVE), Probert J. (NVE)
NO	SYDBREEN	3351	20150723	20160719	tG	-16	Elvehøy H. (NVE), Berg H. (NVE)
NO	SYDBREEN	3351	20160719	20170711	tG	-2	Elvehøy H. (NVE), Berg H. (NVE)
NO	TROLLBERGDALSBREEN	316	20140830	20160910	tG	-27	Elvehøy H. (NVE), Karlsen J. (NVE)
NO	TROLLKYRKJEBREEN	3606	20151011	20160925	tG	-12	Elvehøy H. (NVE), Klokk T. (NVE)
NO	TUFTEBREEN	3352	20150906	20160922	tG	-25	Elvehøy H. (NVE), Åsen K. (NVE)
NO	TUFTEBREEN	3352	20160922	20171010	tG	-23	Elvehøy H. (NVE), Åsen K. (NVE)
NO	VETLE SUPPHELLEBREEN	3607	20151016	20161014	tG	16	Kielland P. (NVE)
NO	VETLE SUPPHELLEBREEN	3607	20161014	20171002	tG	2	Kielland P. (NVE)
NP - Nepal							
NP	YALA	912	20140505	20160506	tG	-15	
NZ - New Zealand							
NZ	ADAMS	2923	20140399	20160311		-X	Chinn T. (NIWA)
NZ	ADAMS	2923	20160330	20170309		ST	Chinn T. (NIWA)
NZ	ALMER/SALISBURY	1548	20140399	20160311		-X	Chinn T. (NIWA)
NZ	ALMER/SALISBURY	1548	20160330	20170309		ST	Chinn T. (NIWA)
NZ	ANDY	1590	20150314	20160311		-X	Chinn T. (NIWA)
NZ	ANDY	1590	20160330	20170309		-X	Chinn T. (NIWA)
NZ	ASHBURTON	1570	20140399	20160330		-X	Chinn T. (NIWA)
NZ	ASHBURTON	1570	20140399	20170309		-X	Chinn T. (NIWA)
NZ	BALFOUR	1604	20150314	20160311		-X	Chinn T. (NIWA)
NZ	BALFOUR	1604	20160330	20170309		-X	Chinn T. (NIWA)
NZ	BARLOW	1608	20150314	20160311		-X	Chinn T. (NIWA)
NZ	BARLOW	1608	20160330	20170309		ST	Chinn T. (NIWA)
NZ	BARRIER	2281	20150314	20160311		ST	Chinn T. (NIWA)
NZ	BARRIER	2281	20160330	20170310		ST	Chinn T. (NIWA)
NZ	BLAIR	1551	20150315	20160330		ST	Chinn T. (NIWA)
NZ	BLAIR	1551	20160330	20170309		ST	Chinn T. (NIWA)
NZ	BONAR	1587	20140399	20170310		ST	Chinn T. (NIWA)
NZ	BREWSTER	1597	20150314	20160311	aP	-8	Vargo L. (ARC)
NZ	BREWSTER	1597	20160311	20170309	aP	-26	Vargo L. (ARC)
NZ	BURTON	1606	20120399	20160311		-X	Chinn T. (NIWA)
NZ	BURTON	1606	20160330	20170309		-X	Chinn T. (NIWA)
NZ	BUTLER	1544	20150315	20160330		ST	Chinn T. (NIWA)
NZ	BUTLER	1544	20160330	20170309		ST	Chinn T. (NIWA)
NZ	CAMERON	1565	20140399	20160330		-X	Chinn T. (NIWA)
NZ	CAMERON	1565	20160330	20170309		ST	Chinn T. (NIWA)
NZ	CROW	1564	20150315	20160330		ST	Chinn T. (NIWA)
NZ	CROW	1564	20160330	20170309		ST	Chinn T. (NIWA)
NZ	DAINTY	2287	20140399	20160311		-X	Chinn T. (NIWA)
NZ	DAINTY	2287	20160330	20170309		ST	Chinn T. (NIWA)
NZ	DART	898	20150314	20160311		-X	Chinn T. (NIWA)
NZ	DART	898	20160330	20170310		ST	Chinn T. (NIWA)
NZ	DECHEN	10425	20150314	20160311		ST	Chinn T. (NIWA)
NZ	DECHEN	10425	20160330	20170310		ST	Chinn T. (NIWA)
NZ	DISPUTE	2286	20130399	20160311		-X	Chinn T. (NIWA)
NZ	DONALD	2284	20140399	20160311		+X	Chinn T. (NIWA)
NZ	DONALD	2284	20160330	20170310		+X	Chinn T. (NIWA)
NZ	DONNE	1585	20150314	20160311		ST	Chinn T. (NIWA)
NZ	DONNE	1585	20160330	20170310		-X	Chinn T. (NIWA)
NZ	DOUGLAS (KAR.)	1601	20150314	20160311		-X	Chinn T. (NIWA)
NZ	DOUGLAS (KAR.)	1601	20160330	20170309		-X	Chinn T. (NIWA)
NZ	EVANS	1611	20140399	20160311		-X	Chinn T. (NIWA)
NZ	EVANS	1611	20160330	20170309		-X	Chinn T. (NIWA)
NZ	FITZGERALD (GOD)	2278	20150315	20160330		ST	Chinn T. (NIWA)
NZ	FITZGERALD (GOD)	2278	20160330	20170309		-X	Chinn T. (NIWA)
NZ	FORGOTTEN COL	2282	20130399	20160311		-X	Chinn T. (NIWA)
NZ	FORGOTTEN COL	2282	20160330	20170310		ST	Chinn T. (NIWA)
NZ	FOX	1536	20150314	20160216	aP	-30	Purdie H. (UCant/DG)
NZ	FOX	1536	20160216	20170329	aP	-130	Purdie H. (UCant/DG)
NZ	FRANZ JOSEF	899	20150314	20160311	aP	-390	Anderson B. (ARC)
NZ	FRANZ JOSEF	899	20160311	20170309	aP	-140	Anderson B. (ARC)
NZ	FRESHFIELD	2966	20150315	20160330		-X	Chinn T. (NIWA)
NZ	FRESHFIELD	2966	20160330	20170309		-X	Chinn T. (NIWA)
NZ	GLENMARY	1550	20150315	20160330		-X	Chinn T. (NIWA)
NZ	GLENMARY	1550	20160330	20170309		-X	Chinn T. (NIWA)
NZ	GODLEY	1581	20160330	20170309		-X	Chinn T. (NIWA)
NZ	GUNN	1560	20150314	20160311		-X	Chinn T. (NIWA)
NZ	GUNN	1560	20160330	20170310		ST	Chinn T. (NIWA)
NZ	HORACE WALKER	1600	20150314	20160311		-X	Chinn T. (NIWA)
NZ	HORACE WALKER	1600	20160330	20170309		-X	Chinn T. (NIWA)
NZ	IVORY	900	20120304	20160311		ST	Chinn T. (NIWA)
NZ	IVORY	900	20160330	20170309		ST	Chinn T. (NIWA)
NZ	KAHUTEA	1569	20150315	20160330		-X	Chinn T. (NIWA)
NZ	KAHUTEA	1569	20160330	20170309		ST	Chinn T. (NIWA)
NZ	KEA	1545	20130399	20160311		-X	Chinn T. (NIWA)
NZ	KEA	1545	20160330	20170309		ST	Chinn T. (NIWA)
NZ	LA PEROUSE	1605	20150314	20160311		-X	Chinn T. (NIWA)
NZ	LA PEROUSE	1605	20160330	20170309		-X	Chinn T. (NIWA)
NZ	LAMBERT	1612	20120304	20160311		ST	Chinn T. (NIWA)
NZ	LAMBERT	1612	20120399	20170309		ST	Chinn T. (NIWA)
NZ	LAWRENCE	2275	20150315	20160330		-X	Chinn T. (NIWA)
NZ	LAWRENCE	2275	20160330	20170309		-X	Chinn T. (NIWA)
NZ	LEEB-LORNTY	2288	20130399	20160311		ST	Chinn T. (NIWA)
NZ	LEEB-LORNTY	2288	20160330	20170309		-X	Chinn T. (NIWA)
NZ	LYELL	1567	20150315	20160330		-X	Chinn T. (NIWA)
NZ	LYELL	1567	20160330	20170309		-X	Chinn T. (NIWA)
NZ	MACAULAY	2280	20150315	20160330		ST	Chinn T. (NIWA)
NZ	MACAULAY	2280	20150315	20170309		ST	Chinn T. (NIWA)
NZ	MARION	1591	20150315	20160311		-X	Chinn T. (NIWA)
NZ	MARION	1591	20160330	20170310		-X	Chinn T. (NIWA)
NZ	MARMADUKE DIXON	1541	20150315	20160330		-X	Chinn T. (NIWA)

PU	GLACIER_NAME	WGMS_ID	FROM	TO	METHOD	FV	INVESTIGATORS_(SPONS_AGENCY)
NZ	MARMADUKE DIXON	1541	20160330	20170309		-X	Chinn T. (NIWA)
NZ	METALILLE	2998	20140399	20160330		-X	Chinn T. (NIWA)
NZ	MUELLER	1575	20150315	20160330		-X	Chinn T. (NIWA)
NZ	MUELLER	1575	20160330	20170309		-X	Chinn T. (NIWA)
NZ	MURCHISON	1578	20150315	20160330		-X	Chinn T. (NIWA)
NZ	MURCHISON	1578	20160330	20170309		-X	Chinn T. (NIWA)
NZ	PARK PASS	1559	20150314	20160311		-X	Chinn T. (NIWA)
NZ	PARK PASS	1559	20160330	20170310		-X	Chinn T. (NIWA)
NZ	RAMSAY	1568	20150315	20160330		-X	Chinn T. (NIWA)
NZ	RAMSAY	1568	20160330	20170309		-X	Chinn T. (NIWA)
NZ	REISCHEK	1566	20150315	20160330		-X	Chinn T. (NIWA)
NZ	REISCHEK	1566	20160330	20170309		-X	Chinn T. (NIWA)
NZ	RICHARDSON	1574	20150315	20160330		-X	Chinn T. (NIWA)
NZ	RICHARDSON	1574	20160330	20170309		-X	Chinn T. (NIWA)
NZ	SALE	1614	20160330	20170309		-X	Chinn T. (NIWA)
NZ	SEPARATION	2279	20140399	20160330		-X	Chinn T. (NIWA)
NZ	SEPARATION	2279	20140399	20170309		ST	Chinn T. (NIWA)
NZ	SIEGE	1616	20150314	20160311		-X	Chinn T. (NIWA)
NZ	SIEGE	1616	20130399	20170309		-X	Chinn T. (NIWA)
NZ	SLADDEN	3611	20140314	20160330		-X	Chinn T. (NIWA)
NZ	SLADDEN	3611	20150314	20170309		-X	Chinn T. (NIWA)
NZ	SNOW WHITE	1588	20150314	20160311		-X	Chinn T. (NIWA)
NZ	SNOW WHITE	1588	20160330	20170310		-X	Chinn T. (NIWA)
NZ	SNOWBALL	1589	20150314	20160311		ST	Chinn T. (NIWA)
NZ	SNOWBALL	1589	20160330	20170310		ST	Chinn T. (NIWA)
NZ	SOUTH CAMERON	3019	20150314	20160330		-X	Chinn T. (NIWA)
NZ	SOUTH CAMERON	3019	20160330	20170309		-X	Chinn T. (NIWA)
NZ	SPENCER	1607	20130399	20160311		+X	Chinn T. (NIWA)
NZ	SPENCER	1607	20160330	20170309		-X	Chinn T. (NIWA)
NZ	ST. JAMES	2274	20160330	20170309		-X	Chinn T. (NIWA)
NZ	STOCKING (TEWAEWAE)	3023	20150315	20160330		ST	Chinn T. (NIWA)
NZ	STOCKING (TEWAEWAE)	3023	20160330	20170309		-X	Chinn T. (NIWA)
NZ	STRAUCHON	1599	20150315	20160311		-X	Chinn T. (NIWA)
NZ	STRAUCHON	1599	20160330	20170309		-X	Chinn T. (NIWA)
NZ	TASMAN	1074	20150315	20160330		-X	Chinn T. (NIWA)
NZ	TASMAN	1074	20160330	20170309		-X	Chinn T. (NIWA)
NZ	THURNEYSON	1554	20150315	20160330		ST	Chinn T. (NIWA)
NZ	THURNEYSON	1554	20160330	20170309		ST	Chinn T. (NIWA)
NZ	VERTEBRAE 20	3033	20140399	20160311		ST	Chinn T. (NIWA)
NZ	VERTEBRAE 20	3033	20160311	20170309		ST	Chinn T. (NIWA)
NZ	VICTORIA	3034	20150315	20160311		-X	Chinn T. (NIWA)
NZ	VICTORIA	3034	20160330	20170309		-X	Chinn T. (NIWA)
NZ	WHATAROA	2285	20120399	20170309		-X	Chinn T. (NIWA)
NZ	WHITBOURNE	1583	20120399	20160311		-X	Chinn T. (NIWA)
NZ	WHITE	3037	20150315	20160330		ST	Chinn T. (NIWA)
NZ	WHITE	3037	20160311	20170309		ST	Chinn T. (NIWA)
NZ	WHYMPER	1609	20140399	20160311		ST	Chinn T. (NIWA)
NZ	WHYMPER	1609	20160311	20170309		-X	Chinn T. (NIWA)
NZ	ZORA	1593		20120304		-X	Chinn T. (NIWA)
NZ	ZORA	1593	20160330	20170310		-X	Chinn T. (NIWA)
PE - Peru							
PE	ARTESONRAJU	3292	20159999	20169999		-22	Cochachin Rapre A. (UGRH/ANA)
PE	ARTESONRAJU	3292		20169999		-13	Cochachin Rapre A. (UGRH/ANA)
PE	GAJAP-YANACARCO	223	20159999	20169999		-23	Cochachin Rapre A. (UGRH/ANA)
PE	GAJAP-YANACARCO	223		20169999		26	Cochachin Rapre A. (UGRH/ANA)
PE	PASTORURI	224	20159999	20169999		-13	Cochachin Rapre A. (UGRH/ANA)
PE	PASTORURI	224		20169999		16	Cochachin Rapre A. (UGRH/ANA)
PE	QUESHQUE E	3529		20169999		-45	Cochachin Rapre A. (UGRH/ANA)
PE	SHALLAP	3293		20169999		-14	Cochachin Rapre A. (UGRH/ANA)
PE	SHALLAP	3293	20159999	20169999		-15	Cochachin Rapre A. (UGRH/ANA)
PE	URUASHRAJU	221	20159999	20169999		-15	Cochachin Rapre A. (UGRH/ANA)
PE	URUASHRAJU	221		20169999		10	Cochachin Rapre A. (UGRH/ANA)
PE	YANAMAREY	226	20159999	20169999		-10	Cochachin Rapre A. (UGRH/ANA)
PE	YANAMAREY	226		20169999		-24	Cochachin Rapre A. (UGRH/ANA)
PL - Poland							
PL	POD BULA	1617	20151007	20161027	tG	+X	Kajdas J. (US/FES)
RU - Russia							
RU	DJANKUAT	726	20140906	20160820	sP	-87	Popovnin V. (MGU), Popovnin V. (RFBR), Aleynikov A. (MGU), Aleynikov A. (RFBR)
RU	DJANKUAT	726	20160820	20170903	sP	-26	Popovnin V. (MGU), Popovnin V. (RFBR), Aleynikov A. (MGU), Aleynikov A. (RFBR)
SE - Sweden							
SE	ISFALLSGLACIAEREN	333	20140813	20160803	aP	-14	Holmlund P. (INK)
SE	KARSOJIETNA	330	20140816	20160810	tG	-34	Holmlund P. (INK)
SE	KARSOJIETNA	330	20160810	20170808	aG	-11	Holmlund E. (INK)
SE	MARMAGLACIAEREN	1461	20140809	20160804	tG	-6	Holmlund E. (INK)
SE	MARMAGLACIAEREN	1461	20160805	20170817	aP	0	Holmlund E. (INK)
SE	PASSUSJIETNA E	331	20130809	20160810	tG	-17	Holmlund P. (INK)
SE	PASSUSJIETNA W	345	20130809	20160810	tG	-12	Holmlund P. (INK)
SE	RIUKOJIETNA	342	20060805	20160810	tG	-50	Holmlund P. (INK)
SE	SALAJEKNA	341	20150820	20160826	sP	-31	Holmlund E. (INK)
SE	STORGLACIAEREN	332	20130808	20160803	tG	-22	Holmlund E. (INK)
SJ - Svalbard (Norway)							
SJ	AUSTRE LOVENBREEN	3812	20151003	20160929	cC	-9	Bernard E. (CNRS), Griselin M. (CNRS), Tolle F. (CNRS), Friedt J. (CNRS)
SJ	AUSTRE LOVENBREEN	3812	20160929	20171005	cC	-8	Bernard E. (CNRS), Griselin M. (CNRS), Tolle F. (CNRS), Friedt J. (CNRS)
SJ	HANSBREEN	306	20150915	20160910	sP	-125	Blaszczyk M. (US/FES)
SJ	HANSBREEN	306	20160910	20170817	sP	-320	Blaszczyk M. (US/FES)
SJ	MONACOBREEN	8319	20119999	20169999	sP	-600	Pelto M. (NCGCP), Oerlemans J. (IMAU)
US - United States of America							
US	COLUMBIA (2057)	76	20150804	20160811	tG	-20	Pelto M. (NCGCP), Pelto M. (NCGCP)
US	COLUMBIA (2057)	76	20160811	20170812	tG	-15	
US	EASTON	1367	20150814	20160802	tG	-25	Pelto M. (NCGCP)

PU	GLACIER_NAME	WGMS_ID	FROM	TO	METHOD	FV	INVESTIGATORS_(SPONS_AGENCY)
US	EASTON	1367	20160802	20170803	tG	-18	Pelto M. (NCGCP)
US	LOWER CURTIS	77	20150812	20160809	tG	-15	Pelto M. (NCGCP)
US	LOWER CURTIS	77	20160809	20170809	tG	-12	Pelto M. (NCGCP)
US	RAINBOW	79	20080805	20160805	tG	-90	Pelto M. (NCGCP)
US	RAINBOW	79	20160805	20170806	tG	-5	Pelto M. (NCGCP)
US	SHOLES	3295	20150807	20160806	tG	-28	Pelto M. (NCGCP)
US	SHOLES	3295	20160806	20170807	tG	-20	Pelto M. (NCGCP)

APPENDIX - Table 3

MASS BALANCE SUMMARY DATA 2016–2017

PU	Political unit, alphabetic 2-digit country code (cf. www.iso.org)
GLACIER NAME	Name of the glacier in capital letters, cf. Appendix Table 1
WGMS ID	Key identifier of the glacier, cf. Appendix Table 1
SYS	System of glaciological measurement (cf. Cogley et al., 2011)
	FLO: floating-date system
	FXD: fixed-date system
	STR: stratigraphic system
	COM: combined system; usually of STR and FXD according to Mayo et al. (1972)
	OTH: other system
FROM	Starting date of balance year, in the format YYYYMMDD*
TO	Ending date of balance year, in the format YYYYMMDD*
AREA	Glacier area (in km^2) used for calculation of specific balances
BW	Specific winter balance in mm water equivalent
BS	Specific summer balance in mm water equivalent
BA	Specific annual balance in mm water equivalent
ELA	Equilibrium line altitude in metres above sea level
AAR	Ratio of accumulation area to total area of the glacier in percent
INVESTIGATORS (SPONS_AGENCY)	Names of the investigators and their sponsoring agencies (cf. Section 8)

*Unknown month or day are each replaced by „99“

PU	GLACIER_NAME	WGMS_ID	SYS	FROM	TO	AREA	BW	BS	BA	ELA	AAR	INVESTIGATORS_(SPONS_AGENCY)
AQ - Antarctica												
AQ	BAHIA DEL DIABLO	2665	COM	20150301	20160228	12.9			-561	430	30	Marinsek S. (IAA-DG), Seco J. (IAA-DG), Ermolin E. (IAA-DG)
AQ	BAHIA DEL DIABLO	2665	COM	20160301	20170228				-380	480	28	Marinsek S. (IAA-DG), Seco J. (IAA-DG), Ermolin E. (IAA-DG)
AQ	HURD	3367	COM	20151220	20160218	4.03	670	-380	290	115	84	Navarro F. (UPM/ETSIT)
AQ	HURD	3367	COM	20161210	20170302	4.03	510	-930	-420	260	34	Navarro F. (UPM/ETSIT)
AQ	JOHNSONS	3366	COM	20151217	20160222	5.36	890	-360	530	100	96	Navarro F. (UPM/ETSIT)
AQ	JOHNSONS	3366	COM	20161210	20170303	5.36	690	-720	-30	190	58	Navarro F. (UPM/ETSIT)
AR - Argentina												
AR	AGUA NEGRA	4532		2015	2016	1.02	1031	-1314	-284			Pitte P. (IANIGLA)
AR	AGUA NEGRA	4532		2016	2017	1.02	1370	-1072	298			Pitte P. (IANIGLA)
AR	BROWN SUPERIOR	3903		2015	2016				167			Cabrera G. (IANIGLA)
AR	BROWN SUPERIOR	3903		2016	2017				798			Cabrera G. (IANIGLA)
AR	CONCONTA NORTE	3902		2015	2016				429			Cabrera G. (IANIGLA)
AR	CONCONTA NORTE	3902		2016	2017				4725			Cabrera G. (IANIGLA)
AR	DE LOS TRES	1675	FLO	20150320	20160501	0.81	1302	-1975	-673	1473	89	Pitte P. (IANIGLA), Ferri Hidalgo L. (IANIGLA)
AR	DE LOS TRES	1675	FLO	20160501	20170425	0.81	460	-2228	-1767	1810	17	Pitte P. (IANIGLA), Ferri Hidalgo L. (IANIGLA)
AR	LOS AMARILLOS	3904		2015	2016				2222			Cabrera G. (IANIGLA)
AR	LOS AMARILLOS	3904		2016	2017				1431			Cabrera G. (IANIGLA)
AR	MARTIAL ESTE	2000	COM	20150401	20160331	0.09	1163	-1108	55	1060	62	Iturraspe R. (UNTDF), Camargo S. (GTF), Strelin J. (IAA-UNC)
AR	MARTIAL ESTE	2000	COM	20160401	20170331	0.09	564	-1270	-706	1088	13	Iturraspe R. (UNTDF), Camargo S. (GTF), Strelin J. (IAA-UNC)
AT - Austria												
AT	GOLDBERG K.	1305	COM	20151006	20160915	1.03	1810	-2670	-860	2960	10	Hynek B. (ZAMG), Neureiter A. (ZAMG)
AT	GOLDBERG K.	1305	COM	20160915	20170901	1.03	1578	-3384	-1806	>3100	0	Hynek B. (ZAMG), Neureiter A. (ZAMG)
AT	HALLSTAETTER G.	535	FXD	20151001	20160930	2.83	2016	-3146	-1130	2646	33	Hartl L. (FGUA), Reingruber K. (FGUA)
AT	HALLSTAETTER G.	535		20161001	20170930	2.83	1799	-2993	-1194	2644	24	Hartl L. (FGUA), Reingruber K. (FGUA), Helfricht K. (FGUA)
AT	HINTEREIS F.	491		20151001	20160930	6.66	948	-2210	-1263	3100	20	Juen I. (ACINN, HD/LT), Galos S. (ACINN, HD/LT), Kaser G. (ACINN, HD/LT)
AT	HINTEREIS F.	491		20161001	20170930	6.66	892	-2718	-1826		3	Juen I. (ACINN, HD/LT), Kaser G. (ACINN, HD/LT)
AT	JAMTAL F.	480		20151001	20160930	2.76	743	-1543	-800	>3200	14	Fischer A. (HD/LT)
AT	JAMTAL F.	480		20161001	20170930	2.8	1045	-2870	-1825	>	0	Fischer A. (HD/LT)
AT	KESSELWAND F.	507	FXD	20151001	20160930	3.61			-500		40	Juen I. (ACINN, HD/LT), Galos S. (ACINN, HD/LT), Kaser G. (ACINN, HD/LT)
AT	KESSELWAND F.	507		20161001	20170930	3.61			-1054		12	Juen I. (ACINN, HD/LT), Kaser G. (ACINN, HD/LT)
AT	KLEINFLEISS K.	547	COM	20151005	20160915	0.79	1513	-1945	-432	2990	33	Hynek B. (ZAMG), Neureiter A. (ZAMG)
AT	KLEINFLEISS K.	547	COM	20160915	20170901	0.79	1215	-3006	-1791	>3050	0	Hynek B. (ZAMG), Neureiter A. (ZAMG)
AT	OBERSULZBACH K.	583		2016	2017				-655			Fischer A. (ACINN)
AT	PASTERZE	566	COM	20151012	20161017	16.28			-1163	2950	40	Hynek B. (ZAMG), Neureiter A. (ZAMG)
AT	PASTERZE	566	COM	20161017	20171014	16.28			-1593	3150	26	Hynek B. (ZAMG), Neureiter A. (ZAMG)
AT	STUBACHER SONNBLICK K.	573	STR	20150920	20160917	0.9			-828	2925	21	Zagel B. (HD/SB), Wiesenegger H. (HD/SB), Slupetzky H. (HD/SB)
AT	STUBACHER SONNBLICK K.	573		2016	2017				-1850			Zagel B. (HD/SB), Wiesenegger H. (HD/SB), Slupetzky H. (HD/SB)
AT	VENEDIGER K.	10460		20151001	20160930	1.99	1116	-1583	-467	2937	46	Seiser B. (HD/SB)
AT	VENEDIGER K.	10460		20161001	20170930	1.99	712	-1349	-655	3100	32	Seiser B. (HD/SB)
AT	VERNAGT F.	489	FXD	20151001	20160930	7.16	780	-1561	-781	3236	20	Braun L. (CGGBAS), Mayer C. (CGGBAS)
AT	VERNAGT F.	489	FXD	20161001	20170930	7.08	700	-2035	-1335	3292	12	Mayer C. (CGGBAS), Braun L. (CGGBAS)
AT	WURTEN K.	545	COM	20150930	20160915	0.28			-1250	2730	10	Reisenhofer S. (ZAMG)
AT	WURTEN K.	545	COM	20160915	20171019	0.28			-1706	2760	5	Reisenhofer S. (ZAMG)
AT	ZETTALUNITZ/MULLWITZ K.	578		20151001	20160930	2.78	1036	-1894	-858	3196	23	Stocker-Waldhuber M. (HD/LT)
AT	ZETTALUNITZ/MULLWITZ K.	578		20161001	20170930	2.78	1038	-2378	-1340	>	3	Stocker-Waldhuber M. (HD/LT)
BO - Bolivia												
BO	CHARQUINI SUR	2667	FXD	20150904	20160905	0.29			-2484	5321	3	Soruco A. (UMSA), Rabatel A. (IGE)
BO	CHARQUINI SUR	2667	FXD	20160905	20170831	0.29			-1112	5262	14	Soruco A. (UMSA), Rabatel A. (IGE)
BO	ZONGO	1503	FXD	20150903	20160830	1.83			-1024	5484	50	Soruco A. (UMSA), Rabatel A. (IGE)
BO	ZONGO	1503	FXD	20160830	20170901	1.83			-237	5415	60	Soruco A. (UMSA), Rabatel A. (IGE)
CA - Canada												
CA	DEVON ICE CAP NW	39	STR	20160504	20170422	1668	109	-593	-483	1470	19	Burgess D. (GSC)
CA	DEVON ICE CAP NW	39	STR	20170422	20180428	1688	165	-319	-153	1250	43	Burgess D. (GSC)
CA	HELM	45		20151004	20160929		1690	-2970	-1280	2140	2	Ednie M. (GSC)
CA	HELM	45		20160929	20171001		1807	-2714	-907	2050	5	Ednie M. (GSC)
CA	MEIGHEN ICE CAP	16	STR	20160420	20170413	58	158	-988	-791	>260	0	Burgess D. (GSC)
CA	MEIGHEN ICE CAP	16	STR	20170413	20180416	58	265	-139	126	80	100	Burgess D. (GSC)
CA	MELVILLE SOUTH ICE CAP	3690	STR	20160426	20170426	51	232	-1051	-792	>715	0	Burgess D. (GSC)
CA	MELVILLE SOUTH ICE CAP	3690	STR	20170426	20180523	51	347	-308	38	575	99	Burgess D. (GSC)
CA	PEYTO	57		2015	2016				-1844			Demuth M. (GSC)
CA	PEYTO	57		20160812	20170929		1228	-2833	-1605	2880	4	Ednie M. (GSC)
CA	PLACE	41		2015	2016				-1330	2500	40	Demuth M. (GSC), Ednie M. (GSC)
CA	PLACE	41		20160930	20170927		1816	-2634	-819	2500	3	Ednie M. (GSC)
CA	WHITE	0	STR	20151001	20160930	38.54			-268	1195	46	Thomson L. (Uottawa/DG), Ecclestone M. (TU/G), Copland L. (Uottawa/DG), Cogley J. (TU/G)
CA	WHITE	0	STR	20161001	20170930	38.54			116	1195	46	Thomson L. (Uottawa/DG), Ecclestone M. (TU/G), Copland L. (Uottawa/DG), Cogley J. (TU/G)
CH - Switzerland												
CH	ADLER	3801	FLO	20150921	20160922	2.01	677	-1267	-590	3485	39	Huss M. (DGUF), Salzmann N. (DGUF), Linsbauer A. (GIUZ)
CH	ADLER	3801	FLO	20160922	20170921	1.98	692	-1639	-947	3605	28	Huss M. (DGUF), Salzmann N. (DGUF), Linsbauer A. (GIUZ)
CH	ALLALIN	394	FLO	20150921	20160822	9.66			-269	3445	41	Bauder A. (VAW)
CH	ALLALIN	394	FLO	20160822	20170821	9.65			-1778	4165	0	Bauder A. (VAW)
CH	BASODINO	463	FLO	20150926	20161004	1.84	1877	-2856	-979	3125	1	Kappenberger G. (VAW)
CH	BASODINO	463	FLO	20161004	20170908	1.76	1648	-2611	-963	3125	1	Kappenberger G. (VAW), . ()
CH	CLARIDENFIRN	2660	FLO	20151011	20160930	4.55	1694	-2118	-424	2875	49	Steinegger U. (VAW), Bauder A. (VAW)
CH	CLARIDENFIRN	2660	FLO	20160930	20170923	4.55	1465	-2661	-1196	2935	25	Steinegger U. (VAW), . ()
CH	CORBASSIERE	366	FLO	20150908	20160914	15.17			-450	3225	52	Bauder A. (VAW)
CH	CORBASSIERE	366	FLO	20160914	20170922	15.08			-1336	3525	18	Bauder A. (VAW)
CH	CORVATSCH SOUTH	4535	FLO	20150919	20160925	0.23	603	-1354	-751	3302	20	Fischer M. (DGUF), Huss M. (DGUF)
CH	CORVATSCH SOUTH	4535	FLO	20160925	20170913	0.22	356	-2332	-1976	3427	0	Huss M. (DGUF)
CH	FINDELEN	389	FLO	20150921	20160922	12.88	991	-1714	-723	3405	38	Huss M. (DGUF), Salzmann N. (DGUF), Linsbauer A. (GIUZ)
CH	FINDELEN	389	FLO	20160922	20170921	12.89	1033	-1977	-944	3405	39	Huss M. (DGUF), Salzmann N. (DGUF), Linsbauer A. (GIUZ)
CH	GIETRO	367	FLO	20150908	20160913	5.32			-414	3225	53	Bauder A. (VAW)
CH	GIETRO	367	FLO	20160913	20170921	5.27			-1666	3425	9	Bauder A. (VAW)
CH	GRIES	359	FLO	20150908	20160907	4.43	1753	-2944	-1191	3135	3	Bauder A. (VAW), Funk M. (VAW)
CH	GRIES	359	FLO	20160907	20170907	4.41	1582	-4019	-2437	3295	0	Funk M. (VAW)
CH	HOHLAUB	3332	FLO	20150921	20160822	2.14			-437	3355	31	Bauder A. (VAW)
CH	HOHLAUB	3332	FLO	20160822	20170821	2.13			-1791	3915	1	Bauder A. (VAW)

PU	GLACIER_NAME	WGMS_ID	SYS	FROM	TO	AREA	BW	BS	BA	ELA	AAR	INVESTIGATORS_(SPONS_AGENCY)
CH	MURTEL VADRET DAL	4339	FLO	20150919	20160925	0.3	796	-1258	-462	3212	31	Fischer M. (DGUF), Huss M. (DGUF)
CH	MURTEL VADRET DAL	4339	FLO	20160925	20170913	0.3	537	-1945	-1408	3252	5	Huss M. (DGUF)
CH	PIZOL	417	FLO	20150927	20160924	0.06	1369	-2068	-699	2727	16	Huss M. (DGUF)
CH	PIZOL	417	FLO	20160924	20170929	0.06	1099	-2751	-1652	2772	2	Huss M. (VAW)
CH	PLAINE MORTE	4246	FLO	20151023	20161006	7.55	1593	-1841	-248	2775	12	Huss M. (DGUF)
CH	PLAINE MORTE	4246	FLO	20161006	20171011	7.41	1421	-3698	-2277	2945	0	Huss M. (DGUF)
CH	RHONE	473	FLO	20150910	20160920	15.57	1402	-1856	-454	2875	63	Bauder A. (VAW)
CH	RHONE	473	FLO	20160920	20170926	15.52	1418	-2666	-1248	3105	32	Bauder A. (VAW)
CH	SANKT ANNA	432	FLO	20150928	20161003	0.18	1339	-2265	-926	2822	22	Fischer M. (DGUF), Huss M. (DGUF)
CH	SANKT ANNA	432	FLO	20161003	20170924	0.18	1432	-2555	-1123	2857	7	Huss M. (DGUF)
CH	SCHWARZBACH	4340	FLO	20150928	20161003	0.04	1614	-2697	-1083	2822	6	Fischer M. (DGUF), Huss M. (DGUF)
CH	SCHWARZBACH	4340	FLO	20161003	20170924	0.04	1879	-3433	-1554	2837	0	Huss M. (DGUF)
CH	SCHWARZBERG	395	FLO	20150921	20160822	5.12			-164	3055	48	Bauder A. (VAW)
CH	SCHWARZBERG	395	FLO	20160822	20170821	5.1			-1768	3355	8	Bauder A. (VAW)
CH	SEX ROUGE	454	FLO	20150920	20160914	0.26	1780	-1924	-144	2817	36	Fischer M. (DGUF), Huss M. (DGUF)
CH	SEX ROUGE	454	FLO	20160914	20170908	0.26	1441	-3982	-2541	2882	0	Huss M. (DGUF)
CH	SILVRETTA	408	FLO	20150926	20160924	2.68	1395	-2001	-606	2865	34	Bauder A. (VAW)
CH	SILVRETTA	408	FLO	20160923	20170929	2.67	1351	-2864	-1513	3025	1	Bauder A. (VAW)
CH	TSANFLEURON	371	FLO	20150921	20160914	2.62	1914	-2140	-226	2795	41	Salzmann N. (DGUF), Huss M. (DGUF)
CH	TSANFLEURON	371	FLO	20160914	20170908	2.47	1727	-3969	-2242	2975	0	Huss M. (DGUF)
CL - Chile												
CL	AMARILLO	3905		2015	2016				3824			Cabrera G. (IANIGLA)
CL	AMARILLO	3905		2016	2017				1403			Cabrera G. (IANIGLA)
CL	ECHAURREN NORTE	1344		2015	2016		1969	-4253	-2284			Barcaza G. (DGA)
CL	ECHAURREN NORTE	1344		2016	2017		2130	-2483	-353			Barcaza G. (DGA)
CL	MOCHO CHOSHUENCO SE	3972		20150514	20160429	5.06			-1319	2039	7	Schaefer M. (UACH)
CL	MOCHO CHOSHUENCO SE	3972		20160429	20170412	5.03			-2469	>2400	0	Schaefer M. (UACH)
CN - China												
CN	PARLUNG NO. 94	3987	FLO	20150929	20160926	2.36			-1086	5448	17	Li S. (CAS/ITPR), Yang W. (CAS/ITPR)
CN	PARLUNG NO. 94	3987	FLO	20160926	20171006	2.36			-959	5407	28	Li S. (CAS/ITPR), Yang W. (CAS/ITPR)
CN	URUMQI GLACIER NO. 1	853	FXD	20150902	20160902	1.59	253	-1033	-780	4152	29	Li H. (CAREERI)
CN	URUMQI GLACIER NO. 1	853	FXD	20160902	20170826	1.59	234	-916	-682	4135	33	Li H. (CAREERI)
CN	URUMQI GLACIER NO. 1 E-BRANCH	1511	FXD	20150828	20160902	1.02	277	-1216	-939	4126	22	Li H. (CAREERI)
CN	URUMQI GLACIER NO. 1 E-BRANCH	1511	FXD	20160902	20170826	1.02	201	-974	-773	4110	29	Li H. (CAREERI)
CN	URUMQI GLACIER NO. 1 W-BRANCH	1512	FXD	20150902	20160901	0.57	210	-708	-498	4177	40	Li H. (CAREERI)
CN	URUMQI GLACIER NO. 1 W-BRANCH	1512	FXD	20160901	20170826	0.57	292	-812	-520	4160	40	Li H. (CAREERI)
CO - Colombia												
CO	CONEJERAS	2721	FXD	20160101	20161231	0.16			-5545	4984	0	Ceballos Lievano J. (IDEAM), Rojas F. (IDEAM)
CO	CONEJERAS	2721	FXD	20170121	20180131	0.14			-4265	>4916	0	Ceballos Lievano J. (IDEAM), Ospina A. (IDEAM)
CO	RITACUBA BLANCO	2763	FXD	20160223	20170213	0.36			-514	5030	44	Ceballos Lievano J. (IDEAM), Rojas F. (IDEAM)
CO	RITACUBA BLANCO	2763	FXD	20170213	20180214	0.36			339	5014	52	Ceballos Lievano J. (IDEAM), Rojas F. (IDEAM)
EC - Ecuador												
EC	ANTIZANA15ALPHA	1624	FXD	20151229	20161227	0.29			-257	5129	68	Cáceres Correa B. (INAMHI)
EC	ANTIZANA15ALPHA	1624	FXD	20161227	20180104	0.29			-379	5107	73	Cáceres Correa B. (INAMHI)
ES - Spain												
ES	MALADETA	942	FXD	20151023	20161028	0.23	2027	-2870	-843	>3200	0	Cobos G. (UPV)
ES	MALADETA	942	FXD	2016	2017	0.23			-1672	>3200	0	Cobos G. (UPV)
FR - France												
FR	ARGENTIERE	354	STR	20150925	20161004				-680			Six D. (CNRS), Vincent C. (CNRS)
FR	ARGENTIERE	354	STR	20161004	20170929				-1500			Six D. (CNRS), Vincent C. (CNRS)
FR	GEBROULAZ	352	STR	20151023	20160930				-410			Six D. (CNRS), Vincent C. (CNRS)
FR	GEBROULAZ	352	STR	20160930	20170929				-1180			Six D. (CNRS), Vincent C. (CNRS)
FR	OSSOUE	2867	STR	20151010	20161009		2770	-4140	-1370		0	René P. (AM)
FR	OSSOUE	2867		2016	2017		2620	-5010	-2390			
FR	SAINT SORLIN	356	STR	20151009	20160928				-1140			Six D. (CNRS), Vincent C. (CNRS)
FR	SAINT SORLIN	356	STR	20160928	20170926				-2640			Six D. (CNRS), Vincent C. (CNRS)
FR	SARENNES	357	STR	20151012	20161007		1720	-3230	-1510			Thibert E. (IRSTEA)
FR	SARENNES	357		2016	2017		1240	-4240	-3000			Thibert E. (IRSTEA)
FR	TRE LA TETE	1314	FLO	20150930	20160926	6.61	340	-1160	-820		52	Moreau L. (GLACIOLAB)
GL - Greenland												
GL	FREYA	3350	FLO	20150817	20160829	5.3	649	-1189	-540	950	15	Hynek B. (ZAMG)
GL	FREYA	3350	FLO	20160829	20170901	5.3	750	-774	-24	700	62	Hynek B. (ZAMG)
GL	MITTIVAKKAT	1629		2015	2016	15.94			-1766	>930	0	Knudsen N. (DESA), Mernild S. (NERSC), de Villiers S. (HVL)
GL	MITTIVAKKAT	1629		2016	2017				-1150			Knudsen N. (DESA), Mernild S. (NERSC), de Villiers S. (HVL)
GL	QASIGIANNGUIT	4566		20150907	20160905				-1565	>1000	0	Abermann J. (GEM-CB)
GL	QASIGIANNGUIT	4566		20160905	20170911				-51	870	46	Abermann J. (GEM-CB)
IS - Iceland												
IS	BRUARJOKULL	3067		2015	2016		1670	-2012	-342	1200	61	Pálsson F. (IES), Gunnarsson A. (NPC)
IS	BRUARJOKULL	3067		2016	2017	1525	1800	-1774	26	1230	61	Pálsson F. (IES), Gunnarsson A. (NPC)
IS	DYNGJUJOKULL	3068		2015	2016		1576	-1812	-236	1385	60	Pálsson F. (IES), Gunnarsson A. (NPC)
IS	DYNGJUJOKULL	3068		2016	2017	1060	1710	-1480	230	1350	64	Pálsson F. (IES), Gunnarsson A. (NPC)
IS	EYJABAKKAJOKULL	3069		2015	2016		1776	-2706	-930	1192	37	Pálsson F. (IES), Gunnarsson A. (NPC)
IS	EYJABAKKAJOKULL	3069		2016	2017	112	2004	-2456	-452	1155	44	Pálsson F. (IES), Gunnarsson A. (NPC)
IS	HOFSJOKULL E	3088	FLO	20151008	20161017	213.1	1330	-2660	-1330	1300	35	Þorsteinsson Þ. (IMO)
IS	HOFSJOKULL E	3088	FLO	20161017	20171003	213.1	1630	-2280	-650	1225	47	Þorsteinsson Þ. (IMO)
IS	HOFSJOKULL N	3089	FLO	20151009	20161018	73.7	1150	-2280	-1130	1330	32	Þorsteinsson Þ. (IMO)
IS	HOFSJOKULL N	3089	FLO	20161018	20171004	73.7	1500	-2110	-610	1300	38	Þorsteinsson Þ. (IMO)
IS	HOFSJOKULL SW	3090	FLO	20151008	20161016	50.1	1540	-1980	-440	1325	56	Þorsteinsson Þ. (IMO)
IS	HOFSJOKULL SW	3090	FLO	20161016	20171005	48.8	1980	-1640	340	1260	64	Þorsteinsson Þ. (IMO)
IS	KOLDUKVISLARJ.	3096		2015	2016		1377	-2019	-642	1510	46	Pálsson F. (IES), Gunnarsson A. (NPC)
IS	KOLDUKVISLARJ.	3096		2016	2017	300	1732	-1773	-41	1355	59	Pálsson F. (IES), Gunnarsson A. (NPC)
IS	LANGJOKULL ICE CAP	3660		2015	2016		1746	-3423	-1677		24	Pálsson F. (IES), Gunnarsson A. (NPC)
IS	LANGJOKULL ICE CAP	3660		2016	2017	871	2311	-3270	-959		43	Pálsson F. (IES), Gunnarsson A. (NPC)
IS	TUNGNAARJOKULL	3126		2015	2016		1523	-2938	-1415	1355	33	Pálsson F. (IES), Gunnarsson A. (NPC)
IS	TUNGNAARJOKULL	3126		2016	2017	345	2171	-2619	-449	1200	53	Pálsson F. (IES), Gunnarsson A. (NPC)

PU	GLACIER_NAME	WGMS_ID	SYS	FROM	TO	AREA	BW	BS	BA	ELA	AAR	INVESTIGATORS_(SPONS_AGENCY)
IT - Italy												
IT	CALDERONE	1107	COM	20150912	20160912	0.02	1679	-2720	-1041			Caira T. (ITAC), Cappelletti D. (CGI; University of Perugia-DCBB), d'Aquila P. (CNSAS), Esposito G. (CNR), Pecci Massimo (CGI; PCM-DARA), Pecci Mattia (ITAC)
IT	CALDERONE	1107	COM	20160915	20170909	0.03	2403	-2997	-594			Caira T. (ITAC), Cappelletti D. (CGI; University of Perugia-DCBB), d'Aquila P. (CNSAS), Esposito G. (CNR), Pecci Massimo (CGI; PCM-DARA), Pecci Mattia (ITAC)
IT	CAMPO SETT.	1106	FLO	20150921	20160925	0.28			-840	3085	19	Scotti R. (SGL), Colombarolli D. (SGL), Bera A. (SGL)
IT	CAMPO SETT.	1106	FLO	20160926	20171011	0.28			-1856	3090	7	Scotti R. (SGL), Colombarolli D. (SGL), Bera A. (SGL)
IT	CARESER	635	FLO	20150919	20160925	1.35	930	-2678	-1748	>3297	0	Carturan L. (UP/TeSAF), Trenti A. (MeteoTrentino)
IT	CARESER	635	FLO	20160925	20170914	1.14	597	-3343	-2747	>3271	0	Carturan L. (UP/TeSAF), Trenti A. (MeteoTrentino)
IT	CIARDONEY	1264	COM	20150915	20160913	0.57	1290	3090	-1800	>3150	0	Mercalli L. (SMI), Cat Berro D. (SMI), Fornengo F. (SMI)
IT	CIARDONEY	1264	COM	20160913	20170906	0.57	2140	-3530	-1390	>3150	0	Mercalli L. (SMI), Cat Berro D. (SMI), Fornengo F. (SMI)
IT	FONTANA BIANCA / WEISSBRUNNF.	1507	FXD	20150922	20160914	0.4	1083	-2394	-1312	>3400	0	Dinale R. (UI/HA), Di Lullo A. (UI/HA)
IT	FONTANA BIANCA / WEISSBRUNNF.	1507	FXD	20160914	20170921	0.4	999	-2879	-1880	>3400	0	Dinale R. (UI/HA), Di Lullo A. (UI/HA)
IT	LA MARE (VEDRETTA DE)	636	FLO	20150912	20160914	1.99	971	-1625	-654	3304	20	Carturan L. (UP/TeSAF)
IT	LA MARE (VEDRETTA DE)	636	FLO	20160914	20170908	1.99	635	-2539	-1904	>3587	1	Carturan L. (UP/TeSAF)
IT	LUNGA (VEDRETTA) / LANGENF.	661	FXD	20151001	20160930	1.6	951	-1960	-1010	>3371	11	Galos S. (UI/HA)
IT	LUNGA (VEDRETTA) / LANGENF.	661	FXD	20161001	20170930	1.6	731	-2797	-2066	>3371	2	Galos S. (UI/HA)
IT	LUPO	1138	FLO	20151114	20160923	0.2	2738	-3711	-973	>2760	4	Scotti R. (SGL), Hagg W. (SGL), Manni M. (SGL), Porta R. (SGL), Ruffoni M. (SGL)
IT	LUPO	1138	FLO	20160924	20171008	0.2	2735	-4082	-1347	>2760	0	Scotti R. (SGL), Manni M. (SGL), Porta R. (SGL), Ruffoni M. (SGL), Zendrini T. (SGL)
IT	MALAVALLE (VEDR. DI) / UEBELTALF.	672	FLO	20150927	20160914	6.03	1340	-2212	-871	3169	19	Franchi G. (UI/HA)
IT	MALAVALLE (VEDR. DI) / UEBELTALF.	672	FLO	20160914	20170927	6.03	1089	-2296	-1207	3222	4	Franchi G. (UI/HA)
IT	PENDENTE (VEDR.) / HANGENDERF.	675	FLO	20150927	20160915	0.85	1633	-2895	-1195	2935	0	Franchi G. (UI/HA)
IT	PENDENTE (VEDR.) / HANGENDERF.	675	FLO	20160915	20170927	0.85	1222	-2811	-1589	2952	0	Franchi G. (UI/HA)
IT	RIES OCC. (VEDR. DI) / RIESERF. WESTL.	645	FXD	20151001	20160914	1.7	1024	-1817	-793	3150	11	Dinale R. (UI/HA), Di Lullo A. (UI/HA)
IT	RIES OCC. (VEDR. DI) / RIESERF. WESTL.	645	FXD	20160914	20170922	1.7	1001	-2241	-1239	>3325	0	Dinale R. (UI/HA), Di Lullo A. (UI/HA)
IT	SURETTA MERID.	2488	FLO	20150928	20160917	0.15	2185	-3521	-1336	>2925	0	Scotti R. (SGL), Villa F. (SGL), Hagg W. (LMU), Bulanti D. (SGL)
IT	SURETTA MERID.	2488	FLO	20160918	20171014	0.15	1967	-4250	-2283	>2925	0	Scotti R. (SGL), Villa F. (SGL), Gallo P. (SGL)
JP - Japan												
JP	HAMAGURI YUKI	897		20151009	20161013		4932	-8206	-3274			Fujita K. (DHAS), Fukui K. (TCSM)
JP	HAMAGURI YUKI	897		20161013	20171005		9618	-6717	2901			Fujita K. (DHAS), Fukui K. (TCSM)
KG - Kyrgyzstan												
KG	ABRAMOV	732	FXD	20151001	20160930	23.93	1760	-2034	-274	4065	80	Azisov E. (CAIAG), Barandun M. (DGUF), Kenzhebaev R. (CAIAG), Esenamanov M. (CAIAG), Saks T. (CAIAG), Usubaliev R. (CAIAG), Hoelzle M. (DGUF)
KG	ABRAMOV	732	FXD	20161001	20170930	23.93	1590	-1944	-354	4155	67	Azisov E. (CAIAG), Barandun M. (DGUF), Kenzhebaev R. (CAIAG), Esenamanov M. (CAIAG), Saks T. (CAIAG), Usubaliev R. (CAIAG), Hoelzle M. (DGUF)
KG	BATYSH SOOK/SYEK ZAPADNIY	781	FLO	20151001	20160930	1.11	214	-639	-425	4245	48	Kenzhebaev R. (CAIAG), Barandun M. (DGUF), Kronenberg M. (DGUF), Azisov E. (CAIAG)
KG	BATYSH SOOK/SYEK ZAPADNIY	781	FLO	20161001	20170930	1.11	165	-1038	-872	4285	25	Kenzhebaev R. (CAIAG), Barandun M. (DGUF), Usubaliev R. (CAIAG), Azisov E. (CAIAG)
KG	BORDU	829	STR	20159999	20160830	4.96	490	-940	-450	4400	17	Popovnin V. (MGU), Satylkanov R. (TshMRC), Ermenbayev B. (TshMRC)
KG	BORDU	829	STR	20160830	20170905	4.91	240	-1580	-1480	4690	0	Popovnin V. (MGU), Satylkanov R. (TshMRC), Ermenbayev B. (TshMRC)
KG	GLACIER NO. 354 (AKSHIYRAK)	3889	FXD	20151001	20160930	6.41	406	-608	-202	4175	48	Barandun M. (DGUF), Usubaliev R. (CAIAG), Azisov E. (CAIAG), Hoelzle M. (DGUF)
KG	GLACIER NO. 354 (AKSHIYRAK)	3889	FXD	20161001	20170930	6.38	522	-1158	-636	4255	48	Kenzhebaev R. (CAIAG), Barandun M. (DGUF), Usubaliev R. (CAIAG), Azisov E. (CAIAG), Hoelzle M. (DGUF)
KG	GLACIER NO. 599 (KJUNGEI ALA-TOO)	10402	FLO	20150619	20160814	1.53			-725	4015	50	Azisov E. (CAIAG), Usubaliev R. (CAIAG), Osmonov A. (CAIAG), Daiyrov M. (CAIAG)
KG	GLACIER NO. 599 (KJUNGEI ALA-TOO)	10402		2016	2017				-197			Azisov E. (CAIAG), Usubaliev R. (CAIAG)
KG	GOLUBIN	753	FXD	20151001	20160930	5.44	1301	-1171	130	3745	72	Azisov E. (CAIAG), Barandun M. (DGUF), Kenzhebaev R. (CAIAG), Esenamanov M. (CAIAG), Saks T. (CAIAG), Usubaliev R. (CAIAG), Hoelzle M. (DGUF)
KG	GOLUBIN	753	FXD	20161001	20170930	5.45	1422	-1567	-144	3775	72	Azisov E. (CAIAG), Barandun M. (DGUF), Kenzhebaev R. (CAIAG), Esenamanov M. (CAIAG), Saks T. (CAIAG), Usubaliev R. (CAIAG), Hoelzle M. (DGUF)
KG	KARA-BATKAK	813	STR	20150922	20160929	2.5	550	-940	-390	4000	41	Popovnin V. (MGU), Satylkanov R. (TshMRC), Ermenbayev B. (TshMRC)
KG	KARA-BATKAK	813	STR	20160929	20170828	2.46	560	-1680	-1120	4030	38	Popovnin V. (MGU), Satylkanov R. (TshMRC), Ermenbayev B. (TshMRC)
KG	SARY TOR (NO.356)	805	STR	20150905	20160830	2.65	420	-1210	-790	>4800	0	Popovnin V. (MGU), Satylkanov R. (TshMRC), Ermenbayev B. (TshMRC)
KG	SARY TOR (NO.356)	805	STR	20160830	20170904	2.64	180	-1660	-1340	>4760	0	Popovnin V. (MGU), Satylkanov R. (TshMRC), Ermenbayev B. (TshMRC)
KZ - Kazakhstan												
KZ	TS.TUYUKSUYSKIY	817	STR	20150920	20160924	2.27	1024	-460	561	3730	48	Kasatkin N. (IGNANKaz), Makarevich K. (IGNANKaz)
KZ	TS.TUYUKSUYSKIY	817	STR	20160925	20170922	2.26	699	-1806	-1113	3950	26	Kasatkin N. (IGNANKaz)
NO - Norway												
NO	AALFOTBREEN	317	COM	20151016	20161005	3.97	4151	-4786	-635	>1368	0	Kjøllmoen B. (NVE)
NO	AALFOTBREEN	317	COM	20161005	20171019	3.98	3263	-4013	-750	1305	21	Kjøllmoen B. (NVE)
NO	AUSTDALSBREEN	321	COM	20151014	20161005	10.63	2010	-3060	-1050	>1747	0	Elvehøy H. (NVE)
NO	AUSTDALSBREEN	321	COM	20161005	20171005	10.63	2417	-2226	191	1410	74	Elvehøy H. (NVE)
NO	BLOMSTOELSKARDSBREEN	3339	COM	20151014	20161006	22.4	3432	-2731	701	1320	81	Kjøllmoen B. (NVE)
NO	BLOMSTOELSKARDSBREEN	3339	COM	20161006	20171009	22.54	2569	-2919	-350	1405	68	Kjøllmoen B. (NVE)
NO	ENGABREEN	298	COM	20151027	20161018	36.25	2655	-2881	-226	1195	55	Elvehøy H. (NVE)
NO	ENGABREEN	298	COM	20161018	20171121	36.25	3669	-2420	1249	1025	84	Elvehøy H. (NVE)
NO	GRAASUBREEN	299	COM	20150922	20160914	2.12	764	-1179	-415			Andreassen L. (NVE)
NO	GRAASUBREEN	299	COM	20160914	20170928	2.12	261	-969	-708			Andreassen L. (NVE)
NO	HANSEBREEN	322	COM	20151016	20161005	2.75	3815	-5119	-1304	>1310	0	Kjøllmoen B. (NVE)
NO	HANSEBREEN	322	COM	20161005	20171019	2.75	3479	-4659	-1179	>1310	0	Kjøllmoen B. (NVE)
NO	HELLSTUGUBREEN	300	COM	20150923	20160912	2.9	1206	-1545	-339	1940	34	Andreassen L. (NVE)
NO	HELLSTUGUBREEN	300	COM	20160912	20170919	2.9	727	-1319	-591	1960	27	Andreassen L. (NVE)
NO	LANGFJORDJOEKELEN	323	COM	20150923	20160922	3.21	1662	-3326	-1664	>1050	0	Kjøllmoen B. (NVE)
NO	LANGFJORDJOEKELEN	323	COM	20160922	20170929	3.22	2084	-2351	-267	810	56	Kjøllmoen B. (NVE)
NO	MOESEVASSBREEN	10473	COM	20161006	20171009	15.49	3134	-2999	135	1335	63	Kjøllmoen B. (NVE)
NO	NIGARDSBREEN	290	COM	20151014	20161005	46.61	2813	-2327	486	1380	89	Kjøllmoen B. (NVE)

PU	GLACIER_NAME	WGMS_ID	SYS	FROM	TO	AREA	BW	BS	BA	ELA	AAR	INVESTIGATORS_(SPONS_AGENCY)
NO	NIGARDSBREEN	290	COM	20161005	20171018	46.61	2167	-1580	587	1440	84	Kjøllmoen B. (NVE)
NO	REMBESDALSKAAKA	2296	COM	20151014	20160930	17.26	2242	-2628	-386	1695	73	Elvehøy H. (NVE)
NO	REMBESDALSKAAKA	2296	COM	20160930	20171018	17.26	2257	-1619	638	1612	83	Elvehøy H. (NVE)
NO	RUNDVASSBREEN	2670	COM	20151007	20160922	10.94	1520	-2010	-490	1265	50	Kjøllmoen B. (NVE)
NO	RUNDVASSBREEN	2670	COM	20160922	20170927	10.85	2010	-1573	437	1155	69	Kjøllmoen B. (NVE)
NO	STORBREEN	302	COM	20150909	20160912	5.14	1105	-1910	-804	1835	29	Andreassen L. (NVE)
NO	STORBREEN	302	COM	20160912	20170827	5.14	1174	-1692	-517	1800	41	Andreassen L. (NVE)
NO	SVELGJABREEN	3343	COM	20151014	20161006	22.35	3325	-3332	-7	1325	60	Kjøllmoen B. (NVE)
NO	SVELGJABREEN	3343	COM	20161006	20171009	22.34	2792	-2950	-159	1325	61	Kjøllmoen B. (NVE)
NP - Nepal												
NP	MERA	3996	FXD	20151208	20161121				-200	5585	53	Wagnon P. (IGE/IRD)
NP	MERA	3996	FXD	20161121	20171108				-560	5721	37	Wagnon P. (IGE/IRD)
NP	POKALDE	3997	FXD	20151201	20161107				-460	5617	20	Wagnon P. (IGE/IRD)
NP	POKALDE	3997	FXD	20161107	20171119				-890	5622	20	Wagnon P. (IGE/IRD)
NP	RIKHA SAMBA	1516	FLO	20151005	20161010	5.32			-334	5872	41	Gurung T. (ICIMOD), Joshi S. (ICIMOD)
NP	RIKHA SAMBA	1516	FLO	20161010	20171010	5.32			-230	5862	42	Joshi S. (ICIMOD), Gurung T. (ICIMOD)
NP	WEST CHANGRI NUP	10401	FXD	20151126	20161111				-750	5554	20	Wagnon P. (IGE/IRD)
NP	WEST CHANGRI NUP	10401	FXD	20161111	20171121				-2560	5676	0	Wagnon P. (IGE/IRD)
NP	YALA	912	FLO	20151126	20161119	1.61			-609	5444	31	Stumm D. (ICIMOD), Gurung T. (ICIMOD), Joshi S. (ICIMOD)
NP	YALA	912	FLO	20161119	20171121	1.61			-1183	5486	18	Joshi S. (ICIMOD), Gurung T. (ICIMOD), Stumm D. (ICIMOD)
NZ - New Zealand												
NZ	BREWSTER	1597	FLO	20150317	20160325	2.03	2647	-3840	-1193	1984	25	Anderson B. (ARC), Cullen N. (DGUO-NZ), Sirguey P. (DGUO-NZ)
NZ	BREWSTER	1597	FLO	20160325	20170315	2.03	2241	-1688	553	1889	66	Anderson B. (ARC), Cullen N. (DGUO-NZ), Sirguey P. (DGUO-NZ)
NZ	ROLLESTON	1538	FLO	20150320	20160507	0.11	3020	-4026	-1006	1815	32	Kerr T. (Rainfall.NZ Ltd), Purdie H. (UCant/DG)
NZ	ROLLESTON	1538	FLO	20160507	20170319	0.11	2591	-2316	275	1808	64	Kerr T. (Rainfall.NZ Ltd), Purdie H. (UCant/DG)
PE - Peru												
PE	ARTESONRAJU	3292		2015	2016	3.59			-1598	5038		Cochachin Rapre A. (UGRH/ANA)
PE	ARTESONRAJU	3292		2016	2017	3.58			-736			Cochachin Rapre A. (UGRH/ANA)
PE	YANAMAREY	226		2015	2016	0.26			-2505	4942		Cochachin Rapre A. (UGRH/ANA)
PE	YANAMAREY	226		2016	2017	0.25			-1032			Cochachin Rapre A. (UGRH/ANA)
RU - Russia												
RU	DJANKUAT	726	STR	20150923	20160920				-730			Popovnin V. (MGU), Popovnin V. (RFBR)
RU	DJANKUAT	726	STR	20160920	20171099	2.69	2880	-3620	-740			Popovnin V. (MGU), Popovnin V. (RFBR), Smirnov A. (MGU), Smirnov A. (RFBR)
RU	GARABASHI	761	STR	20150923	20160920	4.3	1120	-2100	-980	4000	27	Rototayeva O. (IGRAN), Nosenko G. (IGRAN), Tarasova L. (IGRAN), Kerimov A. (IGRAN)
RU	GARABASHI	761	STR	20160920	20170914	4.3	1200	-2130	-930	4000	27	Rototayeva O. (IGRAN), Nosenko G. (IGRAN), Tarasova L. (IGRAN), Kerimov A. (IGRAN)
SE - Sweden												
SE	MARMAGLACIAEREN	1461	COM	2015	20160914	3.96	1120	-1480	-370	1605	28	Pettersson R. (DES/UU)
SE	MARMAGLACIAEREN	1461	COM	20160999	20170906	3.31	950	-690	260	1516	57	Helanow C. (INK), Karlin T. (INK), Rosqvist G. (INK)
SE	RABOTS GLACIAER	334	COM	20150999	20160908	3.13	780	-1430	-650	1445	30	Helanow C. (INK)
SE	RABOTS GLACIAER	334	COM	20160999	20170907	3.13	1130	-1310	-170	1399	38	Helanow C. (INK), Karlin T. (INK), Rosqvist G. (INK)
SE	RIUKOJIETNA	342	COM	20150999	20160913	2.65	910	-1970	-1060	>1430	0	Helanow C. (INK)
SE	RIUKOJIETNA	342	COM	20160999	20170906	2.65	1360	-1210	150	1327	85	Helanow C. (INK), Karlin T. (INK), Rosqvist G. (INK)
SE	STORGLACIAEREN	332	COM	2015	2016	2.9	1510	-1740	-240	1480	46	Jansson P. (INK)
SE	STORGLACIAEREN	332	COM	20160999	20170914	2.89	1540	-1070	470	1379	60	Helanow C. (INK), Karlin T. (INK), Rosqvist G. (INK)
SJ - Svalbard (Norway)												
SJ	AUSTRE BROEGGERBREEN	292		2015	2016		380	-1830	-1450	571	0	Kohler J. (NPI)
SJ	AUSTRE BROEGGERBREEN	292		2016	2017		550	-1070	-790	505	2	Kohler J. (NPI)
SJ	AUSTRE LOVENBREEN	3812	COM	2015	2016		491	-1605	-1114	>550		Bernard E. (CNRS TheMA), Griselin M. (CNRS TheMA), Tolle F. (CNRS TheMA), Friedt J. (CNRS TheMA)
SJ	AUSTRE LOVENBREEN	3812	COM	2016	2017		723	-1122	-399	419	24	Bernard E. (CNRS TheMA), Griselin M. (CNRS TheMA), Tolle F. (CNRS TheMA), Friedt J. (CNRS TheMA)
SJ	HANSBREEN	306	STR	20150923	20161029	56.74	857	-1936	-1078		12	Luks B. (PAS)
SJ	HANSBREEN	306	STR	20161100	20171000	56.74	955	-1651	-697		25	Luks B. (PAS)
SJ	IRENEBREEN	2669	STR	2015	2016				-1468	616	0	Sobota I. (FES NCU)
SJ	IRENEBREEN	2669	STR	2016	2017				-1420	604	1	Sobota I. (FES NCU)
SJ	KONGSVEGEN	1456		2015	20160908		540	-860	-320	591	30	Kohler J. (NPI)
SJ	KONGSVEGEN	1456		20160908	20170914		680	-640	40	525	47	Kohler J. (NPI)
SJ	KRONEBREEN	3504		2015	2016		520	-680	-160	721	34	Kohler J. (NPI)
SJ	KRONEBREEN	3504		2016	2017		570	-530	50	667	45	Kohler J. (NPI)
SJ	MIDTRE LOVENBREEN	291		2015	2016		520	-1730	-1200	506	2	Kohler J. (NPI)
SJ	MIDTRE LOVENBREEN	291		2016	2017		580	-1000	-640	455	6	Kohler J. (NPI)
SJ	NORDENSKIOELDBREEN	3479	STR	2015	2016		525	-508	16	645	52	Van Pelt W. (DES/UU)
SJ	NORDENSKIOELDBREEN	3479	STR	2016	2017		587	-283	304	530	65	Pohjola V. (DES/UU)
SJ	WALDEMARBREEN	2307	STR	2015	2016	2.4			-1773	>583	0	Sobota I. (FES NCU)
SJ	WALDEMARBREEN	2307		2016	2017	2.4			-1425	489	1	Sobota I. (FES NCU)
SJ	WERENSKIOLDBREEN	305	FXD	20150920	20160926	27.11	572	-2367	-1795	775	0	Ignatiuk D. (US/FES)
SJ	WERENSKIOLDBREEN	305	FXD	2016	2017	27.11	733	-1622	-890	493		Ignatiuk D. (US/FES), Laska M. (US/FES)
US - United States of America												
US	BLUE GLACIER	210	COM	20150928	20160927	5.68	2970	-4490	-1520	2050	38	Larrabee M. (NCNP), Riedel J. (NCNP)
US	COLUMBIA (2057)	76	FXD	20150927	20160925				-1180	1620	26	Pelto M. (NCGCP)
US	COLUMBIA (2057)	76	FXD	20160925	20170920	0.79			-750	1640	44	Pelto M. (NCGCP)
US	DANIELS	83	FXD	20150928	20160926				-640		51	Pelto M. (NCGCP)
US	DANIELS	83	FXD	20160926	20170922				-540		47	Pelto M. (NCGCP)
US	EASTON	1367	FXD	20150928	20160927				-820	2200	52	Pelto M. (NCGCP)
US	EASTON	1367	FXD	20160927	20170921				-260	2100	52	Pelto M. (NCGCP)
US	EEL	188	COM	20150928	20160927	0.64	3690	-4090	-400	1860	45	Larrabee M. (NCNP), Riedel J. (NCNP)
US	EMMONS	203	COM	20150928	20161010	11.27	2620	-2630	-10	2595	48	Larrabee M. (NCNP), Riedel J. (NCNP)
US	GULKANA	90	FLO	20150907	20160830	31.8	1030	-2569	-1539			O'Neel S. (USGS-F), Sass L. (USGS-F)
US	GULKANA	90	FLO	20160904	20170909	31.3	580	-2168	-1588	1918		O'Neel S. (USGS-F), McNeil C. (USGS-F), Sass L. (USGS-F)
US	ICE WORM	82	FXD	20150928	20160926				-780		43	Pelto M. (NCGCP)
US	ICE WORM	82	FXD	20160926	20170922				-570		40	Pelto M. (NCGCP)
US	LEMON CREEK	3334	COM	20151013	20161006	10.2	2480	-4359	-1879	1225	12	Pelto M. (JIRP), McNeil C. (JIRP)
US	LEMON CREEK	3334	COM	20161008	20171007	10.1	2410	-3557	-1147	>1500	0	Pelto M. (JIRP), McNeil C. (JIRP)
US	LOWER CURTIS	77	FXD	20150927	20160927				-1550	1670	28	Pelto M. (NCGCP)
US	LOWER CURTIS	77	FXD	20160927	20170924				-650	1650	48	Pelto M. (NCGCP)
US	LYNCH	81	FXD	20150928	20160926				-1420		29	Pelto M. (NCGCP)
US	LYNCH	81	FXD	20160926	20170920				-320		45	Pelto M. (NCGCP)

PU	GLACIER_NAME	WGMS_ID	SYS	FROM	TO	AREA	BW	BS	BA	ELA	AAR	INVESTIGATORS_(SPONS_AGENCY)
US	NOISY CREEK	1666	COM	20150922	20160926	0.46	2910	-3800	-890	1800	21	Larrabee M. (NCNP), Riedel J. (NCNP)
US	NORTH KLAWATTI	1664	COM	20150923	20160926	1.48	2870	-4010	-1150	2170	53	Larrabee M. (NCNP), Riedel J. (NCNP)
US	RAINBOW	79	FXD	20150929	20160926				-880	1800	43	Pelto M. (NCGCP)
US	RAINBOW	79	FXD	20160926	20170923	1.44			510	1670	71	Pelto M. (NCGCP)
US	SANDALEE	1667	COM	20150922	20160926	0.18	2950	-2840	110	2235	32	Larrabee M. (NCNP), Riedel J. (NCNP)
US	SHOLES	3295	FXD	20150926	20160925				-1520		36	Pelto M. (NCGCP)
US	SHOLES	3295	FXD	20160925	20170921				120		53	Pelto M. (NCGCP)
US	SILVER	1665	COM	20150923	20160926	0.4	2690	-2170	520	2330	60	Larrabee M. (NCNP), Riedel J. (NCNP)
US	SOUTH CASCADE	205		2015	2016	1.9	3180	-4107	-927			
US	SOUTH CASCADE	205	FLO	20161004	20171006	1.9	3830	-4514	-684	2064		Whorton E. (USGS-T), McNeil C. (USGS-F)
US	SPERRY	218	COM	20150922	20160920	0.78	2590	-2530	90			Fagre D. (USGS-GNP), Clark A. (USGS-GNP)
US	SPERRY	218	COM	20160920	20170912	0.78	3800	-4230	-430			Fagre D. (USGS-GNP), Clark A. (USGS-GNP)
US	TAKU	124	COM	20151013	20161006				-780	1125		Pelto M. (JIRP), McNeil C. (JIRP)
US	TAKU	124	COM	20161006	20170920				-950	1125	70	Pelto M. (JIRP), McNeil C. (JIRP)
US	WOLVERINE	94	FLO	20150917	20160916	15.9	3600	-3763	-163			O'Neel S. (USGS-F), Sass L. (USGS-F)
US	WOLVERINE	94	FLO	20161015	20170930	15.7	1590	-2608	-1018	1313		O'Neel S. (USGS-F), McNeil C. (USGS-F), Sass L. (USGS-F)
US	YAWNING	75	FXD	20150928	20160926				-960		35	Pelto M. (NCGCP)
US	YAWNING	75	FXD	20160926	20170924				-640		44	Pelto M. (NCGCP)

APPENDIX - Table 4

MASS BALANCE VERSUS ELEVATION DATA 2016–2017

PU	Political unit, alphabetic 2-digit country code (cf. www.iso.org)
GLACIER NAME	Name of the glacier in capital letters, cf. Appendix Table 1
WGMS ID	Key identifier of the glacier, cf. Appendix Table 1
YEAR	Balance year
ELEV FROM	Lower boundary of elevation interval in metres above sea level
ELEV TO	Upper boundary of elevation interval in metres above sea level
AREA	Area of elevation interval in square kilometres
BW	Specific winter balance of elevation interval in mm water equivalent
BS	Specific summer balance of elevation interval in mm water equivalent
BA	Specific annual balance of elevation interval in mm water equivalent

PU	GLACIER_NAME	WGMS_ID	YEAR	ELEV_FROM	ELEV_TO	AREA	BW	BS	BA
AQ - Antarctica									
AQ	BAHIA DEL DIABLO	2665	2016	562	630				100
AQ	BAHIA DEL DIABLO	2665	2016	488	562				250
AQ	BAHIA DEL DIABLO	2665	2016	412	488				-250
AQ	BAHIA DEL DIABLO	2665	2016	338	412				-50
AQ	BAHIA DEL DIABLO	2665	2016	262	338				-650
AQ	BAHIA DEL DIABLO	2665	2016	188	262				-1000
AQ	BAHIA DEL DIABLO	2665	2016	112	188				-1050
AQ	BAHIA DEL DIABLO	2665	2016	38	112				-1625
AQ	BAHIA DEL DIABLO	2665	2017	562	630				15
AQ	BAHIA DEL DIABLO	2665	2017	488	562				25
AQ	BAHIA DEL DIABLO	2665	2017	412	488				-30
AQ	BAHIA DEL DIABLO	2665	2017	338	412				-150
AQ	BAHIA DEL DIABLO	2665	2017	262	338				-500
AQ	BAHIA DEL DIABLO	2665	2017	188	262				-730
AQ	BAHIA DEL DIABLO	2665	2017	112	188				-850
AQ	BAHIA DEL DIABLO	2665	2017	38	112				-1400
AR - Argentina									
AR	DE LOS TRES	1675	2016	1950	2000	0.0007	1250	-500	750
AR	DE LOS TRES	1675	2016	1900	1950	0.0033	1250	-500	750
AR	DE LOS TRES	1675	2016	1850	1900	0.006	1250	-500	750
AR	DE LOS TRES	1675	2016	1800	1850	0.0131	1267	-517	750
AR	DE LOS TRES	1675	2016	1750	1800	0.0245	1458	-654	804
AR	DE LOS TRES	1675	2016	1700	1750	0.032	1640	-674	966
AR	DE LOS TRES	1675	2016	1650	1700	0.0359	1317	-521	796
AR	DE LOS TRES	1675	2016	1600	1650	0.0522	1250	-533	717
AR	DE LOS TRES	1675	2016	1550	1600	0.1106	1259	-610	649
AR	DE LOS TRES	1675	2016	1500	1550	0.1031	1311	-893	418
AR	DE LOS TRES	1675	2016	1450	1500	0.0969	1446	-1422	24
AR	DE LOS TRES	1675	2016	1400	1450	0.1138	1400	-2075	-675
AR	DE LOS TRES	1675	2016	1350	1400	0.0931	1079	-3432	-2353
AR	DE LOS TRES	1675	2016	1300	1350	0.052	1124	-4736	-3612
AR	DE LOS TRES	1675	2016	1250	1300	0.044	1187	-5629	-4442
AR	DE LOS TRES	1675	2016	1200	1250	0.0221	1216	-6217	-5001
AR	DE LOS TRES	1675	2017	1950	2000	0.0007	250	0	250
AR	DE LOS TRES	1675	2017	1900	1950	0.0033	250	0	250
AR	DE LOS TRES	1675	2017	1850	1900	0.006	250	0	250
AR	DE LOS TRES	1675	2017	1800	1850	0.0131	466	-355	110
AR	DE LOS TRES	1675	2017	1750	1800	0.0245	738	-988	-250
AR	DE LOS TRES	1675	2017	1700	1750	0.032	662	-937	-275
AR	DE LOS TRES	1675	2017	1650	1700	0.0359	667	-1329	-662
AR	DE LOS TRES	1675	2017	1600	1650	0.0522	477	-1227	-750
AR	DE LOS TRES	1675	2017	1550	1600	0.1106	504	-1382	-878
AR	DE LOS TRES	1675	2017	1500	1550	0.1031	472	-1752	-1279
AR	DE LOS TRES	1675	2017	1450	1500	0.0969	522	-2062	-1541
AR	DE LOS TRES	1675	2017	1400	1450	0.1138	429	-2509	-2080
AR	DE LOS TRES	1675	2017	1350	1400	0.0931	284	-3069	-2785
AR	DE LOS TRES	1675	2017	1300	1350	0.052	316	-3526	-3210
AR	DE LOS TRES	1675	2017	1250	1300	0.044	281	-4529	-4247
AR	DE LOS TRES	1675	2017	1200	1250	0.0221	266	-5433	-5167
AR	MARTIAL ESTE	2000	2016	1160	1180	0.0024	1000	-565	435
AR	MARTIAL ESTE	2000	2016	1140	1160	0.0051	1100	-610	490
AR	MARTIAL ESTE	2000	2016	1120	1140	0.0074	1200	-700	500
AR	MARTIAL ESTE	2000	2016	1100	1120	0.0112	1300	-700	600
AR	MARTIAL ESTE	2000	2016	1080	1100	0.0149	1500	-400	1100
AR	MARTIAL ESTE	2000	2016	1060	1080	0.0163	1250	-800	450
AR	MARTIAL ESTE	2000	2016	1040	1060	0.0128	1100	-1400	-300
AR	MARTIAL ESTE	2000	2016	1020	1040	0.0127	910	-1990	-1080
AR	MARTIAL ESTE	2000	2016	1000	1020	0.0081	855	-2165	-1310
AR	MARTIAL ESTE	2000	2016	980	1000	0.0023	800	-2250	-1450
AR	MARTIAL ESTE	2000	2016	960	980	0.0006	770	-2520	-1750
AR	MARTIAL ESTE	2000	2017	1160	1180	0.0023	500	-1125	-625
AR	MARTIAL ESTE	2000	2017	1140	1160	0.0051	525	-1105	-580
AR	MARTIAL ESTE	2000	2017	1120	1140	0.0074	550	-1090	-540
AR	MARTIAL ESTE	2000	2017	1100	1120	0.0114	580	-860	-280
AR	MARTIAL ESTE	2000	2017	1080	1100	0.0151	870	-779	91
AR	MARTIAL ESTE	2000	2017	1060	1080	0.0163	710	-1160	-450
AR	MARTIAL ESTE	2000	2017	1040	1060	0.0128	530	-1330	-800
AR	MARTIAL ESTE	2000	2017	1020	1040	0.0127	350	-1670	-1320
AR	MARTIAL ESTE	2000	2017	1000	1020	0.0081	230	-2240	-2010
AR	MARTIAL ESTE	2000	2017	980	1000	0.0021	220	-2350	-2130
AR	MARTIAL ESTE	2000	2017	960	980	0.0004	210	-2410	-2200
AT - Austria									
AT	GOLDBERG K.	1305	2016	3050	3100	0.0056	1479	-1296	183
AT	GOLDBERG K.	1305	2016	3000	3050	0.0405	1786	-1600	186
AT	GOLDBERG K.	1305	2016	2950	3000	0.0811	1774	-1764	10
AT	GOLDBERG K.	1305	2016	2900	2950	0.0911	1583	-2206	-623
AT	GOLDBERG K.	1305	2016	2850	2900	0.0401	1429	-3002	-1573
AT	GOLDBERG K.	1305	2016	2800	2850	0.0045	1777	-3758	-1981
AT	GOLDBERG K.	1305	2016	2750	2800	0.0027	1993	-2129	-136
AT	GOLDBERG K.	1305	2016	2700	2750	0.0719	2060	-2182	-122
AT	GOLDBERG K.	1305	2016	2650	2700	0.288	1862	-2584	-722
AT	GOLDBERG K.	1305	2016	2600	2650	0.2641	1699	-2886	-1187
AT	GOLDBERG K.	1305	2016	2550	2600	0.026	1899	-3603	-1704
AT	GOLDBERG K.	1305	2016	2500	2550	0.0015	2273	-4138	-1865
AT	GOLDBERG K.	1305	2016	2450	2500	0.0227	2650	-3942	-1292
AT	GOLDBERG K.	1305	2016	2400	2450	0.0768	2040	-3761	-1721
AT	GOLDBERG K.	1305	2016	2350	2400	0.0144	1686	-3646	-1960
AT	GOLDBERG K.	1305	2017	3050	3100	0.0056	1512	-2373	-861
AT	GOLDBERG K.	1305	2017	3000	3050	0.0405	1570	-2522	-952
AT	GOLDBERG K.	1305	2017	2950	3000	0.0811	1545	-2311	-766
AT	GOLDBERG K.	1305	2017	2900	2950	0.0911	1387	-2662	-1275
AT	GOLDBERG K.	1305	2017	2850	2900	0.0401	1339	-3927	-2588
AT	GOLDBERG K.	1305	2017	2800	2850	0.0045	1615	-5509	-3894

PU	GLACIER_NAME	WGMS_ID	YEAR	ELEV_FROM	ELEV_TO	AREA	BW	BS	BA
AT	GOLDBERG K.	1305	2017	2750	2800	0.0027	2073	-2901	-828
AT	GOLDBERG K.	1305	2017	2700	2750	0.0719	1887	-2845	-958
AT	GOLDBERG K.	1305	2017	2650	2700	0.288	1637	-3451	-1814
AT	GOLDBERG K.	1305	2017	2600	2650	0.2641	1467	-3698	-2231
AT	GOLDBERG K.	1305	2017	2550	2600	0.026	1502	-3824	-2322
AT	GOLDBERG K.	1305	2017	2500	2550	0.0015	1453	-3868	-2415
AT	GOLDBERG K.	1305	2017	2450	2500	0.0227	1785	-3222	-1437
AT	GOLDBERG K.	1305	2017	2400	2450	0.0768	1749	-4314	-2565
AT	GOLDBERG K.	1305	2017	2350	2400	0.0144	1793	-4772	-2979
AT	HALLSTAETTER G.	535	2016	2850	2900	0.01	2600	-2467	133
AT	HALLSTAETTER G.	535	2016	2800	2850	0.027	2600	-2475	125
AT	HALLSTAETTER G.	535	2016	2750	2800	0.036	2585	-2729	-144
AT	HALLSTAETTER G.	535	2016	2700	2750	0.166	2365	-1914	451
AT	HALLSTAETTER G.	535	2016	2650	2700	0.315	2533	-2313	220
AT	HALLSTAETTER G.	535	2016	2600	2650	0.564	2286	-2449	-163
AT	HALLSTAETTER G.	535	2016	2550	2600	0.491	2067	-3479	-1412
AT	HALLSTAETTER G.	535	2016	2500	2550	0.372	1930	-3074	-1144
AT	HALLSTAETTER G.	535	2016	2450	2500	0.361	1677	-3320	-1643
AT	HALLSTAETTER G.	535	2016	2400	2450	0.218	1519	-4100	-2581
AT	HALLSTAETTER G.	535	2016	2350	2400	0.168	1419	-4748	-3329
AT	HALLSTAETTER G.	535	2016	2300	2350	0.079	1314	-5212	-3898
AT	HALLSTAETTER G.	535	2016	2250	2300	0.026	1163	-5412	-4249
AT	HALLSTAETTER G.	535	2016	2200	2250	0	861	-5111	-4250
AT	HALLSTAETTER G.	535	2017	2850	2900	0.01	2402	-2266	136
AT	HALLSTAETTER G.	535	2017	2800	2850	0.027	2400	-2275	125
AT	HALLSTAETTER G.	535	2017	2750	2800	0.036	2399	-2503	-104
AT	HALLSTAETTER G.	535	2017	2700	2750	0.166	2172	-2063	109
AT	HALLSTAETTER G.	535	2017	2650	2700	0.315	2140	-1983	157
AT	HALLSTAETTER G.	535	2017	2600	2650	0.564	2021	-2121	-100
AT	HALLSTAETTER G.	535	2017	2550	2600	0.492	1747	-2882	-1135
AT	HALLSTAETTER G.	535	2017	2500	2550	0.372	1843	-3158	-1315
AT	HALLSTAETTER G.	535	2017	2450	2500	0.361	1641	-3640	-1999
AT	HALLSTAETTER G.	535	2017	2400	2450	0.218	1360	-4185	-2825
AT	HALLSTAETTER G.	535	2017	2350	2400	0.168	1194	-4715	-3521
AT	HALLSTAETTER G.	535	2017	2300	2350	0.079	1106	-4992	-3886
AT	HALLSTAETTER G.	535	2017	2250	2300	0.026	1012	-5261	-4249
AT	HALLSTAETTER G.	535	2017	2200	2250	0	1000	-5250	-4250
AT	HINTEREIS F.	491	2016	3700	3750	0.0023	591	-466	125
AT	HINTEREIS F.	491	2016	3650	3700	0.0204	592	-642	-50
AT	HINTEREIS F.	491	2016	3600	3650	0.0264	681	-836	-156
AT	HINTEREIS F.	491	2016	3550	3600	0.019	824	-711	113
AT	HINTEREIS F.	491	2016	3500	3550	0.0151	680	-712	-32
AT	HINTEREIS F.	491	2016	3450	3500	0.0612	835	-890	-55
AT	HINTEREIS F.	491	2016	3400	3450	0.1179	937	-1209	-272
AT	HINTEREIS F.	491	2016	3350	3400	0.2372	1098	-1191	-93
AT	HINTEREIS F.	491	2016	3300	3350	0.3955	1105	-908	196
AT	HINTEREIS F.	491	2016	3250	3300	0.4132	1060	-1120	-61
AT	HINTEREIS F.	491	2016	3200	3250	0.4272	1022	-1209	-187
AT	HINTEREIS F.	491	2016	3150	3200	0.5379	1016	-1380	-364
AT	HINTEREIS F.	491	2016	3100	3150	0.6069	955	-1593	-639
AT	HINTEREIS F.	491	2016	3050	3100	0.6312	970	-1839	-868
AT	HINTEREIS F.	491	2016	3000	3050	0.5103	1007	-2043	-1035
AT	HINTEREIS F.	491	2016	2950	3000	0.4012	1017	-2267	-1250
AT	HINTEREIS F.	491	2016	2900	2950	0.4157	971	-2322	-1351
AT	HINTEREIS F.	491	2016	2850	2900	0.35	945	-2503	-1559
AT	HINTEREIS F.	491	2016	2800	2850	0.2945	963	-2961	-1998
AT	HINTEREIS F.	491	2016	2750	2800	0.2418	927	-3261	-2334
AT	HINTEREIS F.	491	2016	2700	2750	0.3192	828	-3718	-2891
AT	HINTEREIS F.	491	2016	2650	2700	0.2249	656	-4534	-3878
AT	HINTEREIS F.	491	2016	2600	2650	0.1694	532	-5388	-4856
AT	HINTEREIS F.	491	2016	2550	2600	0.1292	537	-5789	-5251
AT	HINTEREIS F.	491	2016	2500	2550	0.0728	598	-7225	-6627
AT	HINTEREIS F.	491	2016	2450	2500	0.0189	378	-6232	-5854
AT	HINTEREIS F.	491	2017	3700	3750	0.0023	1000	-1000	0
AT	HINTEREIS F.	491	2017	3650	3700	0.0204	1000	-1083	-83
AT	HINTEREIS F.	491	2017	3600	3650	0.0264	1000	-1077	-77
AT	HINTEREIS F.	491	2017	3550	3600	0.019	992	-1027	-35
AT	HINTEREIS F.	491	2017	3500	3550	0.0151	985	-989	-4
AT	HINTEREIS F.	491	2017	3450	3500	0.0612	874	-1053	-180
AT	HINTEREIS F.	491	2017	3400	3450	0.1179	936	-1388	-453
AT	HINTEREIS F.	491	2017	3350	3400	0.2372	1051	-1552	-501
AT	HINTEREIS F.	491	2017	3300	3350	0.3955	1110	-1671	-561
AT	HINTEREIS F.	491	2017	3250	3300	0.4132	1125	-1839	-714
AT	HINTEREIS F.	491	2017	3200	3250	0.4272	1102	-1980	-878
AT	HINTEREIS F.	491	2017	3150	3200	0.5379	1030	-2013	-983
AT	HINTEREIS F.	491	2017	3100	3150	0.6069	941	-2104	-1163
AT	HINTEREIS F.	491	2017	3050	3100	0.6312	857	-2262	-1405
AT	HINTEREIS F.	491	2017	3000	3050	0.5103	855	-2310	-1455
AT	HINTEREIS F.	491	2017	2950	3000	0.4012	860	-2596	-1736
AT	HINTEREIS F.	491	2017	2900	2950	0.4157	852	-2903	-2051
AT	HINTEREIS F.	491	2017	2850	2900	0.35	831	-3110	-2279
AT	HINTEREIS F.	491	2017	2800	2850	0.2945	802	-3670	-2868
AT	HINTEREIS F.	491	2017	2750	2800	0.2418	783	-3839	-3056
AT	HINTEREIS F.	491	2017	2700	2750	0.3192	743	-4373	-3630
AT	HINTEREIS F.	491	2017	2650	2700	0.2249	699	-5205	-4506
AT	HINTEREIS F.	491	2017	2600	2650	0.1694	528	-5624	-5095
AT	HINTEREIS F.	491	2017	2550	2600	0.1292	316	-5582	-5266
AT	HINTEREIS F.	491	2017	2500	2550	0.0728	285	-6363	-6078
AT	HINTEREIS F.	491	2017	2450	2500	0.0189	243	-6936	-6693
AT	JAMTAL F.	480	2016	3100	3200	0.002	680	-900	-220
AT	JAMTAL F.	480	2016	3000	3100	0.192	829	-934	-105
AT	JAMTAL F.	480	2016	2900	3000	0.623	744	-993	-249
AT	JAMTAL F.	480	2016	2800	2900	0.564	741	-1170	-429
AT	JAMTAL F.	480	2016	2700	2800	0.617	749	-1494	-745
AT	JAMTAL F.	480	2016	2600	2700	0.456	781	-2043	-1262
AT	JAMTAL F.	480	2016	2500	2600	0.262	668	-3066	-2398

PU	GLACIER_NAME	WGMS_ID	YEAR	ELEV_FROM	ELEV_TO	AREA	BW	BS	BA
AT	JAMTAL F.	480	2016	2400	2500	0.042	377	-3345	-2968
AT	JAMTAL F.	480	2017	3100	3200	0.002	1181	-2431	-1250
AT	JAMTAL F.	480	2017	3000	3100	0.195	1073	-2255	-1182
AT	JAMTAL F.	480	2017	2900	3000	0.629	1020	-2380	-1360
AT	JAMTAL F.	480	2017	2800	2900	0.566	1022	-2667	-1645
AT	JAMTAL F.	480	2017	2700	2800	0.626	1088	-3097	-2009
AT	JAMTAL F.	480	2017	2600	2700	0.463	1060	-3131	-2071
AT	JAMTAL F.	480	2017	2500	2600	0.274	1013	-3684	-2671
AT	JAMTAL F.	480	2017	2400	2500	0.04	1000	-4314	-3314
AT	KESSELWAND F.	507	2016	3450	3500	0.0179			168
AT	KESSELWAND F.	507	2016	3400	3450	0.0318			36
AT	KESSELWAND F.	507	2016	3350	3400	0.032			220
AT	KESSELWAND F.	507	2016	3300	3350	0.1847			231
AT	KESSELWAND F.	507	2016	3250	3300	0.5914			364
AT	KESSELWAND F.	507	2016	3200	3250	0.8015			81
AT	KESSELWAND F.	507	2016	3150	3200	0.7188			-697
AT	KESSELWAND F.	507	2016	3100	3150	0.5072			-997
AT	KESSELWAND F.	507	2016	3050	3100	0.4241			-1335
AT	KESSELWAND F.	507	2016	3000	3050	0.1708			-1770
AT	KESSELWAND F.	507	2016	2950	3000	0.0728			-2009
AT	KESSELWAND F.	507	2016	2900	2950	0.0491			-2094
AT	KESSELWAND F.	507	2016	2850	2900	0.0061			-2125
AT	KESSELWAND F.	507	2017	3450	3500	0.0179			-200
AT	KESSELWAND F.	507	2017	3400	3450	0.0318			-232
AT	KESSELWAND F.	507	2017	3350	3400	0.032			-272
AT	KESSELWAND F.	507	2017	3300	3350	0.1847			-241
AT	KESSELWAND F.	507	2017	3250	3300	0.5914			-143
AT	KESSELWAND F.	507	2017	3200	3250	0.8015			-347
AT	KESSELWAND F.	507	2017	3150	3200	0.7188			-1052
AT	KESSELWAND F.	507	2017	3100	3150	0.5072			-1654
AT	KESSELWAND F.	507	2017	3050	3100	0.4241			-2229
AT	KESSELWAND F.	507	2017	3000	3050	0.1708			-2685
AT	KESSELWAND F.	507	2017	2950	3000	0.0728			-2900
AT	KESSELWAND F.	507	2017	2900	2950	0.0491			-2987
AT	KESSELWAND F.	507	2017	2850	2900	0.0061			-3000
AT	KLEINFLEISS K.	547	2016	3000	3050	0.0291	1557	-1441	116
AT	KLEINFLEISS K.	547	2016	2950	3000	0.0822	1511	-1552	-41
AT	KLEINFLEISS K.	547	2016	2900	2950	0.1044	1529	-1773	-244
AT	KLEINFLEISS K.	547	2016	2850	2900	0.1901	1781	-1615	166
AT	KLEINFLEISS K.	547	2016	2800	2850	0.2409	1500	-2065	-565
AT	KLEINFLEISS K.	547	2016	2750	2800	0.1189	1158	-2581	-1423
AT	KLEINFLEISS K.	547	2016	2700	2750	0.02	1100	-3089	-1989
AT	KLEINFLEISS K.	547	2017	3000	3050	0.0291	1415	-2430	-1015
AT	KLEINFLEISS K.	547	2017	2950	3000	0.0822	985	-2317	-1332
AT	KLEINFLEISS K.	547	2017	2900	2950	0.1044	1180	-2773	-1593
AT	KLEINFLEISS K.	547	2017	2850	2900	0.1901	1541	-2738	-1197
AT	KLEINFLEISS K.	547	2017	2800	2850	0.2409	1229	-2995	-1766
AT	KLEINFLEISS K.	547	2017	2750	2800	0.1189	863	-3986	-3123
AT	KLEINFLEISS K.	547	2017	2700	2750	0.02	872	-4748	-3876
AT	PASTERZE	566	2016	3500	3600	0			71
AT	PASTERZE	566	2016	3400	3500	0.141			209
AT	PASTERZE	566	2016	3300	3400	0.647			305
AT	PASTERZE	566	2016	3200	3300	1.547			439
AT	PASTERZE	566	2016	3100	3200	2.64			347
AT	PASTERZE	566	2016	3000	3100	3.118			245
AT	PASTERZE	566	2016	2900	3000	2.297			-315
AT	PASTERZE	566	2016	2800	2900	1.398			-1654
AT	PASTERZE	566	2016	2700	2800	0.713			-1839
AT	PASTERZE	566	2016	2600	2700	0.453			-2219
AT	PASTERZE	566	2016	2500	2600	0.287			-3743
AT	PASTERZE	566	2016	2400	2500	0.237			-4275
AT	PASTERZE	566	2016	2300	2400	0.703			-5281
AT	PASTERZE	566	2016	2200	2300	1.067			-4859
AT	PASTERZE	566	2016	2100	2200	0.899			-4991
AT	PASTERZE	566	2016	2000	2100	0.139			-5062
AT	PASTERZE	566	2017	3500	3600	0			-151
AT	PASTERZE	566	2017	3400	3500	0.141			-106
AT	PASTERZE	566	2017	3300	3400	0.647			119
AT	PASTERZE	566	2017	3200	3300	1.547			126
AT	PASTERZE	566	2017	3100	3200	2.64			-109
AT	PASTERZE	566	2017	3000	3100	3.118			-276
AT	PASTERZE	566	2017	2900	3000	2.297			-754
AT	PASTERZE	566	2017	2800	2900	1.398			-2017
AT	PASTERZE	566	2017	2700	2800	0.713			-2406
AT	PASTERZE	566	2017	2600	2700	0.453			-2920
AT	PASTERZE	566	2017	2500	2600	0.287			-3780
AT	PASTERZE	566	2017	2400	2500	0.237			-4198
AT	PASTERZE	566	2017	2300	2400	0.703			-5272
AT	PASTERZE	566	2017	2200	2300	1.067			-5111
AT	PASTERZE	566	2017	2100	2200	0.899			-5935
AT	PASTERZE	566	2017	2000	2100	0.139			-6461
AT	VENEDIGER K.	10460	2016	3400	3450	0	1500	-625	875
AT	VENEDIGER K.	10460	2016	3350	3400	0.018	1495	-620	875
AT	VENEDIGER K.	10460	2016	3300	3350	0.065	1474	-605	869
AT	VENEDIGER K.	10460	2016	3250	3300	0.061	1471	-616	855
AT	VENEDIGER K.	10460	2016	3200	3250	0.08	1408	-594	814
AT	VENEDIGER K.	10460	2016	3150	3200	0.16	1334	-732	602
AT	VENEDIGER K.	10460	2016	3100	3150	0.154	1302	-972	330
AT	VENEDIGER K.	10460	2016	3050	3100	0.088	1300	-1355	-55
AT	VENEDIGER K.	10460	2016	3000	3050	0.097	1288	-1265	23
AT	VENEDIGER K.	10460	2016	2950	3000	0.113	1268	-1164	104
AT	VENEDIGER K.	10460	2016	2900	2950	0.172	1088	-1120	-32
AT	VENEDIGER K.	10460	2016	2850	2900	0.296	1059	-1228	-169
AT	VENEDIGER K.	10460	2016	2800	2850	0.146	911	-1386	-475
AT	VENEDIGER K.	10460	2016	2750	2800	0.128	900	-1511	-611
AT	VENEDIGER K.	10460	2016	2700	2750	0.111	900	-2391	-1491

PU	GLACIER_NAME	WGMS_ID	YEAR	ELEV_FROM	ELEV_TO	AREA	BW	BS	BA
AT	VENEDIGER K.	10460	2016	2650	2700	0.045	900	-3429	-2529
AT	VENEDIGER K.	10460	2016	2600	2650	0.048	900	-3692	-2792
AT	VENEDIGER K.	10460	2016	2550	2600	0.098	900	-4087	-3187
AT	VENEDIGER K.	10460	2016	2500	2550	0.087	791	-3783	-2992
AT	VENEDIGER K.	10460	2016	2450	2500	0.027	505	-3755	-3250
AT	VENEDIGER K.	10460	2016	2400	2450	0	500	-3750	-3250
AT	VENEDIGER K.	10460	2017	3350	3400	0.018	1327	-164	1163
AT	VENEDIGER K.	10460	2017	3300	3350	0.065	1353	-142	1211
AT	VENEDIGER K.	10460	2017	3250	3300	0.061	1339	-163	1176
AT	VENEDIGER K.	10460	2017	3200	3250	0.08	1340	-244	1096
AT	VENEDIGER K.	10460	2017	3150	3200	0.16	1330	-556	774
AT	VENEDIGER K.	10460	2017	3100	3150	0.154	1216	-1028	188
AT	VENEDIGER K.	10460	2017	3050	3100	0.088	1104	-1294	-190
AT	VENEDIGER K.	10460	2017	3000	3050	0.096	1100	-1216	-116
AT	VENEDIGER K.	10460	2017	2950	3000	0.113	1156	-1205	-49
AT	VENEDIGER K.	10460	2017	2900	2950	0.172	1263	-1459	-196
AT	VENEDIGER K.	10460	2017	2850	2900	0.296	1288	-1481	-193
AT	VENEDIGER K.	10460	2017	2800	2850	0.146	1239	-1986	-747
AT	VENEDIGER K.	10460	2017	2750	2800	0.128	1100	-2137	-1037
AT	VENEDIGER K.	10460	2017	2700	2750	0.111	979	-2352	-1373
AT	VENEDIGER K.	10460	2017	2650	2700	0.045	900	-3249	-2349
AT	VENEDIGER K.	10460	2017	2600	2650	0.048	870	-4291	-3421
AT	VENEDIGER K.	10460	2017	2550	2600	0.098	712	-4880	-4168
AT	VENEDIGER K.	10460	2017	2500	2550	0.087	531	-5018	-4487
AT	VENEDIGER K.	10460	2017	2450	2500	0.027	500	-5250	-4750
AT	VENEDIGER K.	10460	2017	2400	2450	0	500	-5250	-4750
AT	VERNAGT F.	489	2016	3550	3600	0.003			-19
AT	VERNAGT F.	489	2016	3500	3550	0.009			-5
AT	VERNAGT F.	489	2016	3450	3500	0.141			198
AT	VERNAGT F.	489	2016	3400	3450	0.164			40
AT	VERNAGT F.	489	2016	3350	3400	0.187			-12
AT	VERNAGT F.	489	2016	3300	3350	0.305			20
AT	VERNAGT F.	489	2016	3250	3300	0.775			30
AT	VERNAGT F.	489	2016	3200	3250	0.846			-180
AT	VERNAGT F.	489	2016	3150	3200	1.081			-436
AT	VERNAGT F.	489	2016	3100	3150	1.113			-795
AT	VERNAGT F.	489	2016	3050	3100	0.992			-1188
AT	VERNAGT F.	489	2016	3000	3050	0.834			-1612
AT	VERNAGT F.	489	2016	2950	3000	0.485			-2184
AT	VERNAGT F.	489	2016	2900	2950	0.202			-2504
AT	VERNAGT F.	489	2016	2850	2900	0.018			-2890
AT	VERNAGT F.	489	2017	3550	3600	0.003			-19
AT	VERNAGT F.	489	2017	3500	3550	0.01			-35
AT	VERNAGT F.	489	2017	3450	3500	0.144			92
AT	VERNAGT F.	489	2017	3400	3450	0.161			-4
AT	VERNAGT F.	489	2017	3350	3400	0.186			-89
AT	VERNAGT F.	489	2017	3300	3350	0.312			-99
AT	VERNAGT F.	489	2017	3250	3300	0.785			-104
AT	VERNAGT F.	489	2017	3200	3250	0.848			-399
AT	VERNAGT F.	489	2017	3150	3200	1.066			-823
AT	VERNAGT F.	489	2017	3100	3150	1.092			-1419
AT	VERNAGT F.	489	2017	3050	3100	0.967			-2045
AT	VERNAGT F.	489	2017	3000	3050	0.828			-2689
AT	VERNAGT F.	489	2017	2950	3000	0.481			-3400
AT	VERNAGT F.	489	2017	2900	2950	0.182			-3736
AT	VERNAGT F.	489	2017	2850	2900	0.012			-3892
AT	WURTEN K.	545	2016	2750	2800	0.0008			68
AT	WURTEN K.	545	2016	2700	2750	0.0107			-203
AT	WURTEN K.	545	2016	2650	2700	0.117			-393
AT	WURTEN K.	545	2016	2600	2650	0.1038			-1740
AT	WURTEN K.	545	2016	2550	2600	0.0511			-2456
AT	WURTEN K.	545	2017	2750	2800	0.001			72
AT	WURTEN K.	545	2017	2700	2750	0.011			-347
AT	WURTEN K.	545	2017	2650	2700	0.117			-519
AT	WURTEN K.	545	2017	2600	2650	0.104			-2237
AT	WURTEN K.	545	2017	2550	2600	0.051			-3657
AT	ZETTALUNITZ/MULLWITZ K.	578	2016	3400	3450	0.01	407	-1157	-750
AT	ZETTALUNITZ/MULLWITZ K.	578	2016	3350	3400	0.114	513	-940	-427
AT	ZETTALUNITZ/MULLWITZ K.	578	2016	3300	3350	0.191	821	-956	-135
AT	ZETTALUNITZ/MULLWITZ K.	578	2016	3250	3300	0.274	897	-1398	-501
AT	ZETTALUNITZ/MULLWITZ K.	578	2016	3200	3250	0.369	1172	-1087	85
AT	ZETTALUNITZ/MULLWITZ K.	578	2016	3150	3200	0.272	1299	-1360	-61
AT	ZETTALUNITZ/MULLWITZ K.	578	2016	3100	3150	0.22	1265	-1579	-314
AT	ZETTALUNITZ/MULLWITZ K.	578	2016	3050	3100	0.227	1159	-1903	-744
AT	ZETTALUNITZ/MULLWITZ K.	578	2016	3000	3050	0.252	1007	-2189	-1182
AT	ZETTALUNITZ/MULLWITZ K.	578	2016	2950	3000	0.232	1032	-2544	-1512
AT	ZETTALUNITZ/MULLWITZ K.	578	2016	2900	2950	0.244	977	-2946	-1969
AT	ZETTALUNITZ/MULLWITZ K.	578	2016	2850	2900	0.183	982	-2952	-1970
AT	ZETTALUNITZ/MULLWITZ K.	578	2016	2800	2850	0.114	1039	-3034	-1995
AT	ZETTALUNITZ/MULLWITZ K.	578	2016	2750	2800	0.055	797	-3561	-2764
AT	ZETTALUNITZ/MULLWITZ K.	578	2016	2700	2750	0.018	549	-4418	-3869
AT	ZETTALUNITZ/MULLWITZ K.	578	2016	2650	2700	0	500	-4750	-4250
AT	ZETTALUNITZ/MULLWITZ K.	578	2017	3400	3450	0.01	300	-1550	-1250
AT	ZETTALUNITZ/MULLWITZ K.	578	2017	3350	3400	0.114	441	-1553	-1112
AT	ZETTALUNITZ/MULLWITZ K.	578	2017	3300	3350	0.191	802	-1512	-710
AT	ZETTALUNITZ/MULLWITZ K.	578	2017	3250	3300	0.274	789	-1745	-956
AT	ZETTALUNITZ/MULLWITZ K.	578	2017	3200	3250	0.369	1117	-1749	-632
AT	ZETTALUNITZ/MULLWITZ K.	578	2017	3150	3200	0.272	1339	-1972	-633
AT	ZETTALUNITZ/MULLWITZ K.	578	2017	3100	3150	0.22	1377	-2145	-768
AT	ZETTALUNITZ/MULLWITZ K.	578	2017	3050	3100	0.227	1248	-2346	-1098
AT	ZETTALUNITZ/MULLWITZ K.	578	2017	3000	3050	0.252	1070	-2664	-1594
AT	ZETTALUNITZ/MULLWITZ K.	578	2017	2950	3000	0.232	996	-2902	-1906
AT	ZETTALUNITZ/MULLWITZ K.	578	2017	2900	2950	0.244	961	-3308	-2347
AT	ZETTALUNITZ/MULLWITZ K.	578	2017	2850	2900	0.183	1046	-3468	-2422
AT	ZETTALUNITZ/MULLWITZ K.	578	2017	2800	2850	0.114	982	-3331	-2349
AT	ZETTALUNITZ/MULLWITZ K.	578	2017	2750	2800	0.055	852	-3825	-2973

PU	GLACIER_NAME	WGMS_ID	YEAR	ELEV_FROM	ELEV_TO	AREA	BW	BS	BA
AT	ZETTALUNITZ/MULLWITZ K.	578	2017	2700	2750	0.018	501	-4251	-3750
AT	ZETTALUNITZ/MULLWITZ K.	578	2017	2650	2700	0	500	-4250	-3750
BO - Bolivia									
BO	CHARQUINI SUR	2667	2016	5350	5400	0.0018			101
BO	CHARQUINI SUR	2667	2016	5300	5350	0.011			101
BO	CHARQUINI SUR	2667	2016	5250	5300	0.0365			-1181
BO	CHARQUINI SUR	2667	2016	5200	5250	0.0461			-2463
BO	CHARQUINI SUR	2667	2016	5150	5200	0.0922			-2894
BO	CHARQUINI SUR	2667	2016	5100	5150	0.083			-2916
BO	CHARQUINI SUR	2667	2016	5050	5100	0.0179			-2938
BO	CHARQUINI SUR	2667	2017	5350	5400	0.0018			760
BO	CHARQUINI SUR	2667	2017	5300	5350	0.011			760
BO	CHARQUINI SUR	2667	2017	5250	5300	0.0359			308
BO	CHARQUINI SUR	2667	2017	5200	5250	0.0458			-891
BO	CHARQUINI SUR	2667	2017	5150	5200	0.092			-1329
BO	CHARQUINI SUR	2667	2017	5100	5150	0.0822			-1664
BO	CHARQUINI SUR	2667	2017	5050	5100	0.0166			-2310
BO	ZONGO	1503	2016	6000	6100	0.0162			702
BO	ZONGO	1503	2016	5900	6000	0.0573			702
BO	ZONGO	1503	2016	5800	5900	0.1028			702
BO	ZONGO	1503	2016	5700	5800	0.1946			702
BO	ZONGO	1503	2016	5600	5700	0.2607			657
BO	ZONGO	1503	2016	5500	5600	0.2822			662
BO	ZONGO	1503	2016	5400	5500	0.223			-339
BO	ZONGO	1503	2016	5300	5400	0.1556			-1340
BO	ZONGO	1503	2016	5200	5300	0.1246			-2341
BO	ZONGO	1503	2016	5100	5200	0.2063			-3342
BO	ZONGO	1503	2016	5000	5100	0.1779			-5196
BO	ZONGO	1503	2016	4900	5000	0.032			-9525
BO	ZONGO	1503	2017	6000	6100	0.0162			1265
BO	ZONGO	1503	2017	5900	6000	0.0573			1265
BO	ZONGO	1503	2017	5800	5900	0.1028			1265
BO	ZONGO	1503	2017	5700	5800	0.1946			1265
BO	ZONGO	1503	2017	5600	5700	0.2607			1011
BO	ZONGO	1503	2017	5500	5600	0.2822			992
BO	ZONGO	1503	2017	5400	5500	0.223			258
BO	ZONGO	1503	2017	5300	5400	0.1556			-477
BO	ZONGO	1503	2017	5200	5300	0.1246			-1211
BO	ZONGO	1503	2017	5100	5200	0.2053			-2061
BO	ZONGO	1503	2017	5000	5100	0.1746			-3604
BO	ZONGO	1503	2017	4900	5000	0.0293			-7680
CA - Canada									
CA	WHITE	0	2016	1775	1800	0.0076			282
CA	WHITE	0	2016	1750	1775	0.0376			282
CA	WHITE	0	2016	1725	1750	0.059			282
CA	WHITE	0	2016	1700	1725	0.0768			282
CA	WHITE	0	2016	1675	1700	0.0762			282
CA	WHITE	0	2016	1650	1675	0.1031			282
CA	WHITE	0	2016	1625	1650	0.1965			282
CA	WHITE	0	2016	1600	1625	0.1838			282
CA	WHITE	0	2016	1575	1600	0.2632			282
CA	WHITE	0	2016	1550	1575	0.4459			282
CA	WHITE	0	2016	1525	1550	0.4929			282
CA	WHITE	0	2016	1500	1525	0.6284			270
CA	WHITE	0	2016	1475	1500	0.7356			257
CA	WHITE	0	2016	1450	1475	0.8017			243
CA	WHITE	0	2016	1425	1450	1.0921			227
CA	WHITE	0	2016	1400	1425	1.2253			209
CA	WHITE	0	2016	1375	1400	1.4121			190
CA	WHITE	0	2016	1350	1375	1.4211			170
CA	WHITE	0	2016	1325	1350	1.5746			149
CA	WHITE	0	2016	1300	1325	1.3351			126
CA	WHITE	0	2016	1275	1300	1.3699			101
CA	WHITE	0	2016	1250	1275	1.6656			76
CA	WHITE	0	2016	1225	1250	1.278			49
CA	WHITE	0	2016	1200	1225	1.2769			20
CA	WHITE	0	2016	1175	1200	1.2332			-10
CA	WHITE	0	2016	1150	1175	1.3278			-41
CA	WHITE	0	2016	1125	1150	1.2705			-73
CA	WHITE	0	2016	1100	1125	1.1769			-107
CA	WHITE	0	2016	1075	1100	1.1279			-142
CA	WHITE	0	2016	1050	1075	1.0202			-179
CA	WHITE	0	2016	1025	1050	0.859			-217
CA	WHITE	0	2016	1000	1025	0.7342			-256
CA	WHITE	0	2016	975	1000	0.8021			-297
CA	WHITE	0	2016	950	975	0.8773			-339
CA	WHITE	0	2016	925	950	0.5373			-382
CA	WHITE	0	2016	900	925	0.4547			-426
CA	WHITE	0	2016	875	900	0.4761			-472
CA	WHITE	0	2016	850	875	0.7492			-520
CA	WHITE	0	2016	825	850	0.5408			-568
CA	WHITE	0	2016	800	825	0.4			-618
CA	WHITE	0	2016	775	800	0.3016			-669
CA	WHITE	0	2016	750	775	0.2746			-721
CA	WHITE	0	2016	725	750	0.2499			-775
CA	WHITE	0	2016	700	725	0.2359			-830
CA	WHITE	0	2016	675	700	0.6298			-887
CA	WHITE	0	2016	650	675	0.2896			-944
CA	WHITE	0	2016	625	650	0.2136			-1003
CA	WHITE	0	2016	600	625	0.455			-1063
CA	WHITE	0	2016	575	600	0.4927			-1125
CA	WHITE	0	2016	550	575	0.2918			-1187
CA	WHITE	0	2016	525	550	0.1897			-1251
CA	WHITE	0	2016	500	525	0.2059			-1316

PU	GLACIER_NAME	WGMS_ID	YEAR	ELEV_FROM	ELEV_TO	AREA	BW	BS	BA
CA	WHITE	0	2016	475	500	0.2029			-1383
CA	WHITE	0	2016	450	475	0.2771			-1451
CA	WHITE	0	2016	425	450	0.2			-1520
CA	WHITE	0	2016	400	425	0.145			-1590
CA	WHITE	0	2016	375	400	0.1748			-1661
CA	WHITE	0	2016	350	375	0.2542			-1734
CA	WHITE	0	2016	325	350	0.4015			-1808
CA	WHITE	0	2016	300	325	0.2106			-1883
CA	WHITE	0	2016	275	300	0.1129			-1960
CA	WHITE	0	2016	250	275	0.1169			-2037
CA	WHITE	0	2016	225	250	0.352			-2116
CA	WHITE	0	2016	200	225	0.2692			-2196
CA	WHITE	0	2016	175	200	0.3674			-2278
CA	WHITE	0	2016	150	175	0.1282			-2360
CA	WHITE	0	2016	125	150	0.0797			-2444
CA	WHITE	0	2016	100	125	0.057			-2529
CA	WHITE	0	2016	75	100	0.0154			-2529
CA	WHITE	0	2017	1775	1800	0.0076			332
CA	WHITE	0	2017	1750	1775	0.0376			332
CA	WHITE	0	2017	1725	1750	0.059			332
CA	WHITE	0	2017	1700	1725	0.0768			332
CA	WHITE	0	2017	1675	1700	0.0762			332
CA	WHITE	0	2017	1650	1675	0.1031			332
CA	WHITE	0	2017	1625	1650	0.1965			332
CA	WHITE	0	2017	1600	1625	0.1838			332
CA	WHITE	0	2017	1575	1600	0.2632			332
CA	WHITE	0	2017	1550	1575	0.4459			332
CA	WHITE	0	2017	1525	1550	0.4929			332
CA	WHITE	0	2017	1500	1525	0.6284			344
CA	WHITE	0	2017	1475	1500	0.7356			354
CA	WHITE	0	2017	1450	1475	0.8017			362
CA	WHITE	0	2017	1425	1450	1.0921			369
CA	WHITE	0	2017	1400	1425	1.2253			374
CA	WHITE	0	2017	1375	1400	1.4121			378
CA	WHITE	0	2017	1350	1375	1.4211			380
CA	WHITE	0	2017	1325	1350	1.5746			380
CA	WHITE	0	2017	1300	1325	1.3351			379
CA	WHITE	0	2017	1275	1300	1.3699			376
CA	WHITE	0	2017	1250	1275	1.6656			371
CA	WHITE	0	2017	1225	1250	1.278			365
CA	WHITE	0	2017	1200	1225	1.2769			357
CA	WHITE	0	2017	1175	1200	1.2332			347
CA	WHITE	0	2017	1150	1175	1.3278			336
CA	WHITE	0	2017	1125	1150	1.2705			322
CA	WHITE	0	2017	1100	1125	1.1769			307
CA	WHITE	0	2017	1075	1100	1.1279			290
CA	WHITE	0	2017	1050	1075	1.0202			272
CA	WHITE	0	2017	1025	1050	0.859			251
CA	WHITE	0	2017	1000	1025	0.7342			229
CA	WHITE	0	2017	975	1000	0.8021			205
CA	WHITE	0	2017	950	975	0.8773			179
CA	WHITE	0	2017	925	950	0.5373			152
CA	WHITE	0	2017	900	925	0.4547			122
CA	WHITE	0	2017	875	900	0.4761			91
CA	WHITE	0	2017	850	875	0.7492			58
CA	WHITE	0	2017	825	850	0.5408			22
CA	WHITE	0	2017	800	825	0.4			-15
CA	WHITE	0	2017	775	800	0.3016			-54
CA	WHITE	0	2017	750	775	0.2746			-95
CA	WHITE	0	2017	725	750	0.2499			-137
CA	WHITE	0	2017	700	725	0.2359			-182
CA	WHITE	0	2017	675	700	0.6298			-229
CA	WHITE	0	2017	650	675	0.2896			-278
CA	WHITE	0	2017	625	650	0.2136			-328
CA	WHITE	0	2017	600	625	0.455			-381
CA	WHITE	0	2017	575	600	0.4927			-436
CA	WHITE	0	2017	550	575	0.2918			-493
CA	WHITE	0	2017	525	550	0.1897			-551
CA	WHITE	0	2017	500	525	0.2059			-612
CA	WHITE	0	2017	475	500	0.2029			-675
CA	WHITE	0	2017	450	475	0.2771			-740
CA	WHITE	0	2017	425	450	0.2			-807
CA	WHITE	0	2017	400	425	0.145			-876
CA	WHITE	0	2017	375	400	0.1748			-948
CA	WHITE	0	2017	350	375	0.2542			-1021
CA	WHITE	0	2017	325	350	0.4015			-1096
CA	WHITE	0	2017	300	325	0.2106			-1174
CA	WHITE	0	2017	275	300	0.1129			-1254
CA	WHITE	0	2017	250	275	0.1169			-1336
CA	WHITE	0	2017	225	250	0.352			-1420
CA	WHITE	0	2017	200	225	0.2692			-1506
CA	WHITE	0	2017	175	200	0.3674			-1595
CA	WHITE	0	2017	150	175	0.1282			-1685
CA	WHITE	0	2017	125	150	0.0797			-1778
CA	WHITE	0	2017	100	125	0.057			-1874
CA	WHITE	0	2017	75	100	0.0154			-1874
CH - Switzerland									
CH	ADLER	3801	2016	4100	4200	0.0038	453	189	642
CH	ADLER	3801	2016	4000	4100	0.0144	489	166	655
CH	ADLER	3801	2016	3900	4000	0.0462	544	100	644
CH	ADLER	3801	2016	3800	3900	0.1038	573	24	597
CH	ADLER	3801	2016	3700	3800	0.1769	654	-87	567
CH	ADLER	3801	2016	3600	3700	0.2094	708	-321	387
CH	ADLER	3801	2016	3500	3600	0.2494	747	-577	170
CH	ADLER	3801	2016	3400	3500	0.3162	726	-1096	-370

PU	GLACIER_NAME	WGMS_ID	YEAR	ELEV_FROM	ELEV_TO	AREA	BW	BS	BA
CH	ADLER	3801	2016	3300	3400	0.4206	636	-1810	-1174
CH	ADLER	3801	2016	3200	3300	0.2481	671	-2420	-1749
CH	ADLER	3801	2016	3100	3200	0.1194	707	-2739	-2032
CH	ADLER	3801	2016	3000	3100	0.0988	681	-3088	-2407
CH	ADLER	3801	2016	2900	3000	0.0038	661	-3332	-2671
CH	ADLER	3801	2017	4100	4200	0.0038	531		603
CH	ADLER	3801	2017	4000	4100	0.0144	661		778
CH	ADLER	3801	2017	3900	4000	0.0462	664		686
CH	ADLER	3801	2017	3800	3900	0.1031	634		545
CH	ADLER	3801	2017	3700	3800	0.1769	677		437
CH	ADLER	3801	2017	3600	3700	0.2081	675		131
CH	ADLER	3801	2017	3500	3600	0.2462	700		-254
CH	ADLER	3801	2017	3400	3500	0.315	770		-746
CH	ADLER	3801	2017	3300	3400	0.3988	727		-1456
CH	ADLER	3801	2017	3200	3300	0.2525	614		-2328
CH	ADLER	3801	2017	3100	3200	0.1231	582		-2851
CH	ADLER	3801	2017	3000	3100	0.0856	771		-2892
CH	ADLER	3801	2017	2900	3000	0.0056	818		-3126
CH	ALLALIN	394	2016	4100	4200	0.0913			190
CH	ALLALIN	394	2016	4000	4100	0.1813			241
CH	ALLALIN	394	2016	3900	4000	0.2906			256
CH	ALLALIN	394	2016	3800	3900	0.4488			241
CH	ALLALIN	394	2016	3700	3800	0.5175			273
CH	ALLALIN	394	2016	3600	3700	0.8375			206
CH	ALLALIN	394	2016	3500	3600	0.9488			160
CH	ALLALIN	394	2016	3400	3500	1.0631			24
CH	ALLALIN	394	2016	3300	3400	1.005			-172
CH	ALLALIN	394	2016	3200	3300	1.5919			-538
CH	ALLALIN	394	2016	3100	3200	0.7388			-580
CH	ALLALIN	394	2016	3000	3100	0.7169			-684
CH	ALLALIN	394	2016	2900	3000	0.4862			-864
CH	ALLALIN	394	2016	2800	2900	0.5825			-1264
CH	ALLALIN	394	2016	2700	2800	0.1569			-1454
CH	ALLALIN	394	2016	2600	2700	0.0019			-1340
CH	ALLALIN	394	2017	4100	4200	0.0912	370		-353
CH	ALLALIN	394	2017	4000	4100	0.1812	425		-335
CH	ALLALIN	394	2017	3900	4000	0.2906	482		-418
CH	ALLALIN	394	2017	3800	3900	0.4488	525		-543
CH	ALLALIN	394	2017	3700	3800	0.5175	575		-577
CH	ALLALIN	394	2017	3600	3700	0.8375	627		-840
CH	ALLALIN	394	2017	3500	3600	0.9488	660		-1037
CH	ALLALIN	394	2017	3400	3500	1.0631	664		-1424
CH	ALLALIN	394	2017	3300	3400	1.005	649		-1864
CH	ALLALIN	394	2017	3200	3300	1.5919	643		-2311
CH	ALLALIN	394	2017	3100	3200	0.7388	638		-2328
CH	ALLALIN	394	2017	3000	3100	0.7169	633		-2630
CH	ALLALIN	394	2017	2900	3000	0.4862	627		-3001
CH	ALLALIN	394	2017	2800	2900	0.5725	621		-3523
CH	ALLALIN	394	2017	2700	2800	0.1544	615		-3632
CH	ALLALIN	394	2017	2600	2700	0.0019	595		-3320
CH	BASODINO	463	2016	3100	3200	0.0594	1422	-2437	-1015
CH	BASODINO	463	2016	3000	3100	0.3144	1790	-2220	-430
CH	BASODINO	463	2016	2900	3000	0.5281	1936	-2643	-707
CH	BASODINO	463	2016	2800	2900	0.4294	1853	-3216	-1363
CH	BASODINO	463	2016	2700	2800	0.36	1914	-3198	-1284
CH	BASODINO	463	2016	2600	2700	0.1406	2011	-3253	-1242
CH	BASODINO	463	2016	2500	2600	0.01	2104	-3306	-1202
CH	BASODINO	463	2017	3100	3200	0.0544	1171		-882
CH	BASODINO	463	2017	3000	3100	0.3125	1471		-709
CH	BASODINO	463	2017	2900	3000	0.5212	1709		-745
CH	BASODINO	463	2017	2800	2900	0.4225	1656		-1240
CH	BASODINO	463	2017	2700	2800	0.3388	1727		-1062
CH	BASODINO	463	2017	2600	2700	0.1081	1837		-1399
CH	CLARIDENFIRN	2660	2016	3200	3300	0.0056	0	0	0
CH	CLARIDENFIRN	2660	2016	3100	3200	0.0312	1353	-1043	310
CH	CLARIDENFIRN	2660	2016	3000	3100	0.1938	1755	-1258	497
CH	CLARIDENFIRN	2660	2016	2900	3000	1.4975	1648	-1628	20
CH	CLARIDENFIRN	2660	2016	2800	2900	1.3044	1784	-1884	-100
CH	CLARIDENFIRN	2660	2016	2700	2800	0.6925	1691	-2193	-502
CH	CLARIDENFIRN	2660	2016	2600	2700	0.755	1690	-3266	-1576
CH	CLARIDENFIRN	2660	2016	2500	2600	0.0706	1263	-6927	-5664
CH	CLARIDENFIRN	2660	2017	3200	3300	0.0056	0		0
CH	CLARIDENFIRN	2660	2017	3100	3200	0.0312	1116		-455
CH	CLARIDENFIRN	2660	2017	3000	3100	0.1938	1469		-198
CH	CLARIDENFIRN	2660	2017	2900	3000	1.4975	1396		-974
CH	CLARIDENFIRN	2660	2017	2800	2900	1.3044	1529		-948
CH	CLARIDENFIRN	2660	2017	2700	2800	0.6925	1488		-1181
CH	CLARIDENFIRN	2660	2017	2600	2700	0.755	1522		-1968
CH	CLARIDENFIRN	2660	2017	2500	2600	0.0706	1169		-5579
CH	CORBASSIERE	366	2016	4300	4400	0.0062			344
CH	CORBASSIERE	366	2016	4200	4300	0.0794			501
CH	CORBASSIERE	366	2016	4100	4200	0.2406			603
CH	CORBASSIERE	366	2016	4000	4100	0.5331			632
CH	CORBASSIERE	366	2016	3900	4000	0.2238			726
CH	CORBASSIERE	366	2016	3800	3900	0.2469			813
CH	CORBASSIERE	366	2016	3700	3800	0.31			775
CH	CORBASSIERE	366	2016	3600	3700	0.4162			711
CH	CORBASSIERE	366	2016	3500	3600	0.9225			533
CH	CORBASSIERE	366	2016	3400	3500	1.3638			391
CH	CORBASSIERE	366	2016	3300	3400	2.3438			197
CH	CORBASSIERE	366	2016	3200	3300	1.5519			46
CH	CORBASSIERE	366	2016	3100	3200	1.0088			68
CH	CORBASSIERE	366	2016	3000	3100	1.6488			-440
CH	CORBASSIERE	366	2016	2900	3000	0.8894			-705
CH	CORBASSIERE	366	2016	2800	2900	0.6638			-995
CH	CORBASSIERE	366	2016	2700	2800	0.71			-1952

PU	GLACIER_NAME	WGMS_ID	YEAR	ELEV_FROM	ELEV_TO	AREA	BW	BS	BA
CH	CORBASSIERE	366	2016	2600	2700	1.0869			-2919
CH	CORBASSIERE	366	2016	2500	2600	0.48			-3201
CH	CORBASSIERE	366	2016	2400	2500	0.36			-3984
CH	CORBASSIERE	366	2016	2300	2400	0.08			-4263
CH	CORBASSIERE	366	2017	4300	4400	0.0062	256		172
CH	CORBASSIERE	366	2017	4200	4300	0.0794	343		292
CH	CORBASSIERE	366	2017	4100	4200	0.2406	443		332
CH	CORBASSIERE	366	2017	4000	4100	0.5331	502		321
CH	CORBASSIERE	366	2017	3900	4000	0.2238	545		401
CH	CORBASSIERE	366	2017	3800	3900	0.2469	645		420
CH	CORBASSIERE	366	2017	3700	3800	0.31	716		339
CH	CORBASSIERE	366	2017	3600	3700	0.4162	804		230
CH	CORBASSIERE	366	2017	3500	3600	0.9225	871		4
CH	CORBASSIERE	366	2017	3400	3500	1.3638	949		-243
CH	CORBASSIERE	366	2017	3300	3400	2.3438	1010		-637
CH	CORBASSIERE	366	2017	3200	3300	1.5519	1066		-971
CH	CORBASSIERE	366	2017	3100	3200	1.0088	1140		-1030
CH	CORBASSIERE	366	2017	3000	3100	1.6488	1128		-1652
CH	CORBASSIERE	366	2017	2900	3000	0.8894	1076		-1898
CH	CORBASSIERE	366	2017	2800	2900	0.6637	1020		-2188
CH	CORBASSIERE	366	2017	2700	2800	0.71	938		-3157
CH	CORBASSIERE	366	2017	2600	2700	1.0869	875		-4093
CH	CORBASSIERE	366	2017	2500	2600	0.4662	782		-4358
CH	CORBASSIERE	366	2017	2400	2500	0.3206	673		-5033
CH	CORBASSIERE	366	2017	2300	2400	0.0494	639		-5268
CH	CORVATSCH SOUTH	4535	2016	3400	3450	0.0022	699	-569	130
CH	CORVATSCH SOUTH	4535	2016	3350	3400	0.0132	724	-604	120
CH	CORVATSCH SOUTH	4535	2016	3300	3350	0.0314	762	-725	37
CH	CORVATSCH SOUTH	4535	2016	3250	3300	0.0695	647	-1397	-750
CH	CORVATSCH SOUTH	4535	2016	3200	3250	0.0609	522	-1659	-1137
CH	CORVATSCH SOUTH	4535	2016	3150	3200	0.0232	503	-1662	-1159
CH	CORVATSCH SOUTH	4535	2016	3100	3150	0.0081	503	-1493	-990
CH	CORVATSCH SOUTH	4535	2016	3050	3100	0.0091	495	-1742	-1247
CH	CORVATSCH SOUTH	4535	2016	3000	3050	0.0051	506	-1052	-546
CH	CORVATSCH SOUTH	4535	2016	2950	3000	0.003	536	-1257	-721
CH	CORVATSCH SOUTH	4535	2017	3400	3450	0.0017	357		-1239
CH	CORVATSCH SOUTH	4535	2017	3350	3400	0.0114	398		-1048
CH	CORVATSCH SOUTH	4535	2017	3300	3350	0.0312	422		-1359
CH	CORVATSCH SOUTH	4535	2017	3250	3300	0.0808	392		-1941
CH	CORVATSCH SOUTH	4535	2017	3200	3250	0.0607	275		-2433
CH	CORVATSCH SOUTH	4535	2017	3150	3200	0.0212	287		-2443
CH	CORVATSCH SOUTH	4535	2017	3100	3150	0.0053	441		-1672
CH	CORVATSCH SOUTH	4535	2017	3050	3100	0.0084	431		-1768
CH	CORVATSCH SOUTH	4535	2017	3000	3050	0.0005	413		-1295
CH	FINDELEN	389	2016	3900	4000	0.0106	585	-319	266
CH	FINDELEN	389	2016	3800	3900	0.2519	771	-351	420
CH	FINDELEN	389	2016	3700	3800	0.3012	979	-333	646
CH	FINDELEN	389	2016	3600	3700	0.4394	1381	-246	1135
CH	FINDELEN	389	2016	3500	3600	1.6081	1431	-421	1010
CH	FINDELEN	389	2016	3400	3500	2.3575	1338	-826	512
CH	FINDELEN	389	2016	3300	3400	1.945	1051	-1296	-245
CH	FINDELEN	389	2016	3200	3300	1.8344	823	-1886	-1063
CH	FINDELEN	389	2016	3100	3200	1.7356	777	-2234	-1457
CH	FINDELEN	389	2016	3000	3100	0.9769	718	-2819	-2101
CH	FINDELEN	389	2016	2900	3000	0.5775	643	-3427	-2784
CH	FINDELEN	389	2016	2800	2900	0.3375	484	-4400	-3916
CH	FINDELEN	389	2016	2700	2800	0.2175	205	-5317	-5112
CH	FINDELEN	389	2016	2600	2700	0.2588	94	-6624	-6530
CH	FINDELEN	389	2016	2500	2600	0.0281	-42	-7261	-7303
CH	FINDELEN	389	2017	3900	4000	0.0106	801		796
CH	FINDELEN	389	2017	3800	3900	0.2519	952		865
CH	FINDELEN	389	2017	3700	3800	0.3012	919		674
CH	FINDELEN	389	2017	3600	3700	0.4394	1184		837
CH	FINDELEN	389	2017	3500	3600	1.6081	1248		638
CH	FINDELEN	389	2017	3400	3500	2.3575	1275		318
CH	FINDELEN	389	2017	3300	3400	1.9512	1192		-165
CH	FINDELEN	389	2017	3200	3300	1.8325	1018		-1089
CH	FINDELEN	389	2017	3100	3200	1.715	910		-1857
CH	FINDELEN	389	2017	3000	3100	0.9956	777		-2852
CH	FINDELEN	389	2017	2900	3000	0.5781	690		-3290
CH	FINDELEN	389	2017	2800	2900	0.3406	555		-4062
CH	FINDELEN	389	2017	2700	2800	0.2375	368		-5380
CH	FINDELEN	389	2017	2600	2700	0.1919	255		-6502
CH	FINDELEN	389	2017	2500	2600	0.0819	202		-7301
CH	GIETRO	367	2016	3800	3900	0.0088			830
CH	GIETRO	367	2016	3700	3800	0.1156			806
CH	GIETRO	367	2016	3600	3700	0.1212			753
CH	GIETRO	367	2016	3500	3600	0.1169			740
CH	GIETRO	367	2016	3400	3500	0.1725			626
CH	GIETRO	367	2016	3300	3400	0.9163			375
CH	GIETRO	367	2016	3200	3300	1.6412			192
CH	GIETRO	367	2016	3100	3200	0.9925			-544
CH	GIETRO	367	2016	3000	3100	0.8812			-1652
CH	GIETRO	367	2016	2900	3000	0.2344			-3018
CH	GIETRO	367	2016	2800	2900	0.0763			-4015
CH	GIETRO	367	2016	2700	2800	0.0456			-5298
CH	GIETRO	367	2017	3800	3900	0.0088	993		461
CH	GIETRO	367	2017	3700	3800	0.1156	975		439
CH	GIETRO	367	2017	3600	3700	0.1212	985		384
CH	GIETRO	367	2017	3500	3600	0.1169	1090		320
CH	GIETRO	367	2017	3400	3500	0.1725	1176		88
CH	GIETRO	367	2017	3300	3400	0.9162	1171		-893
CH	GIETRO	367	2017	3200	3300	1.6412	1161		-1489
CH	GIETRO	367	2017	3100	3200	0.985	1098		-2038
CH	GIETRO	367	2017	3000	3100	0.8694	973		-2785
CH	GIETRO	367	2017	2900	3000	0.225	821		-3489

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CH	GIETRO	367	2017	2800	2900	0.0712	577		-4416
CH	GIETRO	367	2017	2700	2800	0.03	491		-5108
CH	GRIES	359	2016	3300	3400	0.0006	806	-1621	-815
CH	GRIES	359	2016	3200	3300	0.0713	1212	-2137	-925
CH	GRIES	359	2016	3100	3200	0.2062	1916	-2015	-99
CH	GRIES	359	2016	3000	3100	1.4175	2088	-2555	-467
CH	GRIES	359	2016	2900	3000	0.9769	1896	-2683	-787
CH	GRIES	359	2016	2800	2900	0.5656	1811	-2778	-967
CH	GRIES	359	2016	2700	2800	0.2956	1674	-3054	-1380
CH	GRIES	359	2016	2600	2700	0.1781	1449	-3768	-2319
CH	GRIES	359	2016	2500	2600	0.6131	975	-4258	-3283
CH	GRIES	359	2016	2400	2500	0.1056	960	-4578	-3618
CH	GRIES	359	2017	3300	3400	0.0006	586		-1474
CH	GRIES	359	2017	3200	3300	0.0712	1006		-1714
CH	GRIES	359	2017	3100	3200	0.1956	1611		-1229
CH	GRIES	359	2017	3000	3100	1.3769	1838		-1626
CH	GRIES	359	2017	2900	3000	0.9925	1691		-2125
CH	GRIES	359	2017	2800	2900	0.5863	1616		-2293
CH	GRIES	359	2017	2700	2800	0.2925	1482		-2881
CH	GRIES	359	2017	2600	2700	0.165	1281		-3618
CH	GRIES	359	2017	2500	2600	0.5938	1080		-4333
CH	GRIES	359	2017	2400	2500	0.1331	1108		-5085
CH	HOHLAUB	3332	2016	4000	4100	0.0044			-65
CH	HOHLAUB	3332	2016	3900	4000	0.0281			157
CH	HOHLAUB	3332	2016	3800	3900	0.0738			136
CH	HOHLAUB	3332	2016	3700	3800	0.0688			173
CH	HOHLAUB	3332	2016	3600	3700	0.0631			279
CH	HOHLAUB	3332	2016	3500	3600	0.1181			339
CH	HOHLAUB	3332	2016	3400	3500	0.1719			263
CH	HOHLAUB	3332	2016	3300	3400	0.2794			41
CH	HOHLAUB	3332	2016	3200	3300	0.2944			-222
CH	HOHLAUB	3332	2016	3100	3200	0.3725			-506
CH	HOHLAUB	3332	2016	3000	3100	0.405			-1053
CH	HOHLAUB	3332	2016	2900	3000	0.2406			-1521
CH	HOHLAUB	3332	2016	2800	2900	0.0175			-1665
CH	HOHLAUB	3332	2017	4000	4100	0.0044	327		-630
CH	HOHLAUB	3332	2017	3900	4000	0.0281	394		-271
CH	HOHLAUB	3332	2017	3800	3900	0.0738	510		-488
CH	HOHLAUB	3332	2017	3700	3800	0.0688	531		-419
CH	HOHLAUB	3332	2017	3600	3700	0.0631	591		-312
CH	HOHLAUB	3332	2017	3500	3600	0.1181	743		-435
CH	HOHLAUB	3332	2017	3400	3500	0.1719	805		-738
CH	HOHLAUB	3332	2017	3300	3400	0.2794	810		-1253
CH	HOHLAUB	3332	2017	3200	3300	0.2944	765		-1694
CH	HOHLAUB	3332	2017	3100	3200	0.3725	737		-2085
CH	HOHLAUB	3332	2017	3000	3100	0.4044	698		-2737
CH	HOHLAUB	3332	2017	2900	3000	0.2319	662		-3238
CH	HOHLAUB	3332	2017	2800	2900	0.0175	589		-3270
CH	MURTEL VADRET DAL	4339	2016	3300	3350	0.001	1115	108	1223
CH	MURTEL VADRET DAL	4339	2016	3250	3300	0.0159	1282	-209	1073
CH	MURTEL VADRET DAL	4339	2016	3200	3250	0.1052	989	-778	211
CH	MURTEL VADRET DAL	4339	2016	3150	3200	0.1093	648	-1480	-832
CH	MURTEL VADRET DAL	4339	2016	3100	3150	0.0524	624	-1786	-1162
CH	MURTEL VADRET DAL	4339	2016	3050	3100	0.0147	579	-2396	-1817
CH	MURTEL VADRET DAL	4339	2017	3300	3350	0.001	814		584
CH	MURTEL VADRET DAL	4339	2017	3250	3300	0.0159	914		175
CH	MURTEL VADRET DAL	4339	2017	3200	3250	0.1052	736		-741
CH	MURTEL VADRET DAL	4339	2017	3150	3200	0.1093	403		-1715
CH	MURTEL VADRET DAL	4339	2017	3100	3150	0.0524	352		-2196
CH	MURTEL VADRET DAL	4339	2017	3050	3100	0.0147	350		-2945
CH	PIZOL	417	2016	2750	2800	0.0049	1569	-1633	-64
CH	PIZOL	417	2016	2700	2750	0.0145	1374	-1775	-401
CH	PIZOL	417	2016	2650	2700	0.0316	1357	-2192	-835
CH	PIZOL	417	2016	2600	2650	0.0101	1300	-2311	-1011
CH	PIZOL	417	2017	2750	2800	0.0049	1215		-1457
CH	PIZOL	417	2017	2700	2750	0.0145	1190		-847
CH	PIZOL	417	2017	2650	2700	0.0316	1057		-1964
CH	PIZOL	417	2017	2600	2650	0.0101	1043		-1931
CH	PLAINE MORTE	4246	2016	2900	3000	0.0256	1581	-775	806
CH	PLAINE MORTE	4246	2016	2800	2900	0.1206	1602	-1123	479
CH	PLAINE MORTE	4246	2016	2700	2800	5.1056	1598	-1752	-154
CH	PLAINE MORTE	4246	2016	2600	2700	2.1388	1583	-2065	-482
CH	PLAINE MORTE	4246	2016	2500	2600	0.1525	1556	-2410	-854
CH	PLAINE MORTE	4246	2016	2400	2500	0.0062	1481	-2481	-1000
CH	RHONE	473	2016	3500	3600	0.3344	943	-297	646
CH	RHONE	473	2016	3400	3500	0.795	1483	-89	1394
CH	RHONE	473	2016	3300	3400	0.9512	1695	-196	1499
CH	RHONE	473	2016	3200	3300	1.4562	1709	-456	1253
CH	RHONE	473	2016	3100	3200	1.5344	1617	-671	946
CH	RHONE	473	2016	3000	3100	1.8838	1571	-830	741
CH	RHONE	473	2016	2900	3000	2.1712	1580	-1193	387
CH	RHONE	473	2016	2800	2900	2.21	1671	-1725	-54
CH	RHONE	473	2016	2700	2800	1.0675	1292	-2752	-1460
CH	RHONE	473	2016	2600	2700	0.9569	760	-3962	-3202
CH	RHONE	473	2016	2500	2600	1.0194	747	-4961	-4214
CH	RHONE	473	2016	2400	2500	0.5494	743	-5839	-5096
CH	RHONE	473	2016	2300	2400	0.5075	615	-6048	-5433
CH	RHONE	473	2016	2200	2300	0.1344	603	-6190	-5587
CH	RHONE	473	2017	3500	3600	0.3344	1508		826
CH	RHONE	473	2017	3400	3500	0.795	1810		1084
CH	RHONE	473	2017	3300	3400	0.9512	1766		726
CH	RHONE	473	2017	3200	3300	1.4562	1715		374
CH	RHONE	473	2017	3100	3200	1.535	1621		-21
CH	RHONE	473	2017	3000	3100	1.8762	1621		-216
CH	RHONE	473	2017	2900	3000	2.1494	1615		-621
CH	RHONE	473	2017	2800	2900	2.1463	1570		-1264

PU	GLACIER_NAME	WGMS_ID	YEAR	ELEV_FROM	ELEV_TO	AREA	BW	BS	BA
CH	RHONE	473	2017	2700	2800	1.0681	1287		-2240
CH	RHONE	473	2017	2600	2700	0.8144	856		-3337
CH	RHONE	473	2017	2500	2600	1.0669	771		-4258
CH	RHONE	473	2017	2400	2500	0.6306	579		-5367
CH	RHONE	473	2017	2300	2400	0.4006	369		-5987
CH	RHONE	473	2017	2200	2300	0.2988	417		-6116
CH	SANKT ANNA	432	2016	2900	2950	0.0006	1035	-351	684
CH	SANKT ANNA	432	2016	2850	2900	0.0157	1531	-1299	232
CH	SANKT ANNA	432	2016	2800	2850	0.0416	1580	-1414	166
CH	SANKT ANNA	432	2016	2750	2800	0.04	1489	-2075	-586
CH	SANKT ANNA	432	2016	2700	2750	0.0461	1189	-2803	-1614
CH	SANKT ANNA	432	2016	2650	2700	0.0333	1036	-3109	-2073
CH	SANKT ANNA	432	2016	2600	2650	0.0071	1079	-3164	-2085
CH	SANKT ANNA	432	2017	2900	2950	0.0006	1089		396
CH	SANKT ANNA	432	2017	2850	2900	0.0157	1728		-472
CH	SANKT ANNA	432	2017	2800	2850	0.0416	1528		-515
CH	SANKT ANNA	432	2017	2750	2800	0.04	1408		-878
CH	SANKT ANNA	432	2017	2700	2750	0.0461	1479		-1120
CH	SANKT ANNA	432	2017	2650	2700	0.0333	1210		-2224
CH	SANKT ANNA	432	2017	2600	2650	0.0071	1141		-2488
CH	SCHWARZBACH	4340	2016	2800	2850	0.0121	1614	-2363	-749
CH	SCHWARZBACH	4340	2016	2750	2800	0.0236	1616	-2841	-1225
CH	SCHWARZBACH	4340	2016	2700	2750	0.0013	1588	-3191	-1603
CH	SCHWARZBACH	4340	2017	2800	2850	0.0121	1940		-1124
CH	SCHWARZBACH	4340	2017	2750	2800	0.0236	1852		-1740
CH	SCHWARZBACH	4340	2017	2700	2750	0.0013	1805		-2197
CH	SCHWARZBERG	395	2016	3500	3600	0.0575			1026
CH	SCHWARZBERG	395	2016	3400	3500	0.2294			1162
CH	SCHWARZBERG	395	2016	3300	3400	0.3675			998
CH	SCHWARZBERG	395	2016	3200	3300	0.6481			715
CH	SCHWARZBERG	395	2016	3100	3200	0.7931			348
CH	SCHWARZBERG	395	2016	3000	3100	0.8544			-24
CH	SCHWARZBERG	395	2016	2900	3000	1.1875			-612
CH	SCHWARZBERG	395	2016	2800	2900	0.6675			-1323
CH	SCHWARZBERG	395	2016	2700	2800	0.3012			-2032
CH	SCHWARZBERG	395	2016	2600	2700	0.0144			-2340
CH	SCHWARZBERG	395	2017	3500	3600	0.0575	1021		277
CH	SCHWARZBERG	395	2017	3400	3500	0.2294	1172		281
CH	SCHWARZBERG	395	2017	3300	3400	0.3675	1197		-39
CH	SCHWARZBERG	395	2017	3200	3300	0.6481	1178		-511
CH	SCHWARZBERG	395	2017	3100	3200	0.7931	1109		-1144
CH	SCHWARZBERG	395	2017	3000	3100	0.8544	1014		-1821
CH	SCHWARZBERG	395	2017	2900	3000	1.1875	896		-2556
CH	SCHWARZBERG	395	2017	2800	2900	0.6656	760		-3186
CH	SCHWARZBERG	395	2017	2700	2800	0.29	621		-3811
CH	SCHWARZBERG	395	2017	2600	2700	0.0088	558		-4066
CH	SEX ROUGE	454	2016	2850	2900	0.011	2541	-1440	1101
CH	SEX ROUGE	454	2016	2800	2850	0.1606	1790	-1950	-160
CH	SEX ROUGE	454	2016	2750	2800	0.0799	1650	-1948	-298
CH	SEX ROUGE	454	2016	2700	2750	0.0044	1914	-1824	90
CH	SEX ROUGE	454	2017	2850	2900	0.011	1817		-861
CH	SEX ROUGE	454	2017	2800	2850	0.1606	1405		-2692
CH	SEX ROUGE	454	2017	2750	2800	0.0799	1454		-2489
CH	SEX ROUGE	454	2017	2700	2750	0.0044	1601		-2214
CH	SILVRETTA	408	2016	3000	3100	0.1169	1239	-1063	176
CH	SILVRETTA	408	2016	2900	3000	0.5825	1490	-1241	249
CH	SILVRETTA	408	2016	2800	2900	0.5762	1476	-1444	32
CH	SILVRETTA	408	2016	2700	2800	0.6631	1450	-2164	-714
CH	SILVRETTA	408	2016	2600	2700	0.3919	1343	-2515	-1172
CH	SILVRETTA	408	2016	2500	2600	0.3375	1113	-3585	-2472
CH	SILVRETTA	408	2016	2400	2500	0.0156	1051	-3869	-2818
CH	SILVRETTA	408	2017	3000	3100	0.1088	1244		-909
CH	SILVRETTA	408	2017	2900	3000	0.5762	1433		-805
CH	SILVRETTA	408	2017	2800	2900	0.5706	1424		-1087
CH	SILVRETTA	408	2017	2700	2800	0.645	1376		-1520
CH	SILVRETTA	408	2017	2600	2700	0.4112	1301		-1899
CH	SILVRETTA	408	2017	2500	2600	0.3331	1155		-3019
CH	SILVRETTA	408	2017	2400	2500	0.0256	1104		-3583
CH	TSANFLEURON	371	2016	2900	3000	0.06	2017	-1453	564
CH	TSANFLEURON	371	2016	2800	2900	0.9181	2144	-1816	328
CH	TSANFLEURON	371	2016	2700	2800	1.1256	1871	-2151	-280
CH	TSANFLEURON	371	2016	2600	2700	0.4569	1611	-2708	-1097
CH	TSANFLEURON	371	2016	2500	2600	0.0575	1404	-3365	-1961
CH	TSANFLEURON	371	2017	2900	3000	0.0569	1993		-794
CH	TSANFLEURON	371	2017	2800	2900	0.8631	1814		-1810
CH	TSANFLEURON	371	2017	2700	2800	1.0969	1724		-2293
CH	TSANFLEURON	371	2017	2600	2700	0.4044	1550		-3052
CH	TSANFLEURON	371	2017	2500	2600	0.045	1381		-3841
CL - Chile									
CL	MOCHO CHOSHUENCO SE	3972	2016	2300	2400	0.056			-48
CL	MOCHO CHOSHUENCO SE	3972	2016	2200	2300	0.158			-76
CL	MOCHO CHOSHUENCO SE	3972	2016	2100	2200	0.347			-148
CL	MOCHO CHOSHUENCO SE	3972	2016	2000	2100	1.221			-185
CL	MOCHO CHOSHUENCO SE	3972	2016	1900	2000	2.045			-1184
CL	MOCHO CHOSHUENCO SE	3972	2016	1800	1900	0.96			-2994
CL	MOCHO CHOSHUENCO SE	3972	2016	1700	1800	0.241			-4061
CL	MOCHO CHOSHUENCO SE	3972	2016	1600	1700	0.032			-4520
CL	MOCHO CHOSHUENCO SE	3972	2017	2300	2400	0.056			-359
CL	MOCHO CHOSHUENCO SE	3972	2017	2200	2300	0.158			-435
CL	MOCHO CHOSHUENCO SE	3972	2017	2100	2200	0.347			-692
CL	MOCHO CHOSHUENCO SE	3972	2017	2000	2100	1.221			-1149
CL	MOCHO CHOSHUENCO SE	3972	2017	1900	2000	2.045			-2423
CL	MOCHO CHOSHUENCO SE	3972	2017	1800	1900	0.96			-4489
CL	MOCHO CHOSHUENCO SE	3972	2017	1700	1800	0.241			-5622
CL	MOCHO CHOSHUENCO SE	3972	2017	1600	1700	0.032			-6187

PU	GLACIER_NAME	WGMS_ID	YEAR	ELEV_FROM	ELEV_TO	AREA	BW	BS	BA
CN - China									
CN	PARLUNG NO. 94	3987	2016	5580	5635	0.009			200
CN	PARLUNG NO. 94	3987	2016	5540	5580	0.027			200
CN	PARLUNG NO. 94	3987	2016	5500	5540	0.094			200
CN	PARLUNG NO. 94	3987	2016	5460	5500	0.196			200
CN	PARLUNG NO. 94	3987	2016	5420	5460	0.222			-74
CN	PARLUNG NO. 94	3987	2016	5380	5420	0.341			-497
CN	PARLUNG NO. 94	3987	2016	5340	5380	0.324			-867
CN	PARLUNG NO. 94	3987	2016	5300	5340	0.408			-1248
CN	PARLUNG NO. 94	3987	2016	5260	5300	0.252			-1744
CN	PARLUNG NO. 94	3987	2016	5220	5260	0.21			-2077
CN	PARLUNG NO. 94	3987	2016	5180	5220	0.107			-2464
CN	PARLUNG NO. 94	3987	2016	5140	5180	0.118			-2867
CN	PARLUNG NO. 94	3987	2016	5100	5140	0.039			-3400
CN	PARLUNG NO. 94	3987	2016	5075	5100	0.01			-3720
CN	PARLUNG NO. 94	3987	2017	5580	5635	0.009			200
CN	PARLUNG NO. 94	3987	2017	5540	5580	0.0271			200
CN	PARLUNG NO. 94	3987	2017	5500	5540	0.0936			200
CN	PARLUNG NO. 94	3987	2017	5460	5500	0.1964			200
CN	PARLUNG NO. 94	3987	2017	5420	5460	0.2215			200
CN	PARLUNG NO. 94	3987	2017	5380	5420	0.3411			-80
CN	PARLUNG NO. 94	3987	2017	5340	5380	0.3235			-545
CN	PARLUNG NO. 94	3987	2017	5300	5340	0.4079			-924
CN	PARLUNG NO. 94	3987	2017	5260	5300	0.2515			-1833
CN	PARLUNG NO. 94	3987	2017	5220	5260	0.2102			-2316
CN	PARLUNG NO. 94	3987	2017	5180	5220	0.1065			-2604
CN	PARLUNG NO. 94	3987	2017	5140	5180	0.1181			-3150
CN	PARLUNG NO. 94	3987	2017	5100	5140	0.0391			-3799
CN	PARLUNG NO. 94	3987	2017	5075	5100	0.0103			-4200
CN	URUMQI GLACIER NO. 1	853	2016	4450	4482	0.012	271	587	858
CN	URUMQI GLACIER NO. 1	853	2016	4400	4450	0.023	266	525	791
CN	URUMQI GLACIER NO. 1	853	2016	4350	4400	0.034	258	425	683
CN	URUMQI GLACIER NO. 1	853	2016	4300	4350	0.038	251	317	568
CN	URUMQI GLACIER NO. 1	853	2016	4250	4300	0.034	247	198	445
CN	URUMQI GLACIER NO. 1	853	2016	4200	4250	0.083	292	22	314
CN	URUMQI GLACIER NO. 1	853	2016	4150	4200	0.179	300	-162	138
CN	URUMQI GLACIER NO. 1	853	2016	4100	4150	0.21	289	-544	-255
CN	URUMQI GLACIER NO. 1	853	2016	4050	4100	0.255	261	-874	-613
CN	URUMQI GLACIER NO. 1	853	2016	4000	4050	0.206	232	-1297	-1065
CN	URUMQI GLACIER NO. 1	853	2016	3950	4000	0.17	254	-1540	-1286
CN	URUMQI GLACIER NO. 1	853	2016	3900	3950	0.197	224	-1996	-1772
CN	URUMQI GLACIER NO. 1	853	2016	3850	3900	0.096	206	-2421	-2215
CN	URUMQI GLACIER NO. 1	853	2016	3800	3850	0.051	131	-3103	-2972
CN	URUMQI GLACIER NO. 1	853	2016	3787	3800	0.006	93	-3503	-3410
CN	URUMQI GLACIER NO. 1	853	2017	4450	4482	0.012	442	319	761
CN	URUMQI GLACIER NO. 1	853	2017	4400	4450	0.023	435	281	716
CN	URUMQI GLACIER NO. 1	853	2017	4350	4400	0.034	424	204	628
CN	URUMQI GLACIER NO. 1	853	2017	4300	4350	0.038	415	117	532
CN	URUMQI GLACIER NO. 1	853	2017	4250	4300	0.034	404	28	432
CN	URUMQI GLACIER NO. 1	853	2017	4200	4250	0.083	354	-3	351
CN	URUMQI GLACIER NO. 1	853	2017	4150	4200	0.179	331	-60	271
CN	URUMQI GLACIER NO. 1	853	2017	4100	4150	0.21	303	-402	-99
CN	URUMQI GLACIER NO. 1	853	2017	4050	4100	0.255	243	-808	-565
CN	URUMQI GLACIER NO. 1	853	2017	4000	4050	0.206	179	-1142	-963
CN	URUMQI GLACIER NO. 1	853	2017	3950	4000	0.17	155	-1431	-1276
CN	URUMQI GLACIER NO. 1	853	2017	3900	3950	0.197	123	-1758	-1635
CN	URUMQI GLACIER NO. 1	853	2017	3850	3900	0.096	79	-2175	-2096
CN	URUMQI GLACIER NO. 1	853	2017	3800	3850	0.051	73	-2567	-2494
CN	URUMQI GLACIER NO. 1	853	2017	3787	3800	0.006	90	-2489	-2399
CN	URUMQI GLACIER NO. 1 E-BRANCH	1511	2016	4250	4252	0.001	347	59	406
CN	URUMQI GLACIER NO. 1 E-BRANCH	1511	2016	4200	4250	0.043	343	-9	334
CN	URUMQI GLACIER NO. 1 E-BRANCH	1511	2016	4150	4200	0.12	333	-111	222
CN	URUMQI GLACIER NO. 1 E-BRANCH	1511	2016	4100	4150	0.117	317	-324	-7
CN	URUMQI GLACIER NO. 1 E-BRANCH	1511	2016	4050	4100	0.15	290	-734	-444
CN	URUMQI GLACIER NO. 1 E-BRANCH	1511	2016	4000	4050	0.136	279	-1094	-815
CN	URUMQI GLACIER NO. 1 E-BRANCH	1511	2016	3950	4000	0.131	296	-1466	-1170
CN	URUMQI GLACIER NO. 1 E-BRANCH	1511	2016	3900	3950	0.175	248	-1947	-1699
CN	URUMQI GLACIER NO. 1 E-BRANCH	1511	2016	3850	3900	0.091	218	-2393	-2175
CN	URUMQI GLACIER NO. 1 E-BRANCH	1511	2016	3800	3850	0.051	131	-3103	-2972
CN	URUMQI GLACIER NO. 1 E-BRANCH	1511	2016	3787	3800	0.006	93	-3503	-3410
CN	URUMQI GLACIER NO. 1 E-BRANCH	1511	2017	4200	4250	0.043	318	65	383
CN	URUMQI GLACIER NO. 1 E-BRANCH	1511	2017	4150	4200	0.12	310	46	356
CN	URUMQI GLACIER NO. 1 E-BRANCH	1511	2017	4100	4150	0.117	285	-59	226
CN	URUMQI GLACIER NO. 1 E-BRANCH	1511	2017	4050	4100	0.151	230	-422	-192
CN	URUMQI GLACIER NO. 1 E-BRANCH	1511	2017	4000	4050	0.136	191	-898	-707
CN	URUMQI GLACIER NO. 1 E-BRANCH	1511	2017	3950	4000	0.131	188	-1252	-1064
CN	URUMQI GLACIER NO. 1 E-BRANCH	1511	2017	3900	3950	0.175	137	-1720	-1583
CN	URUMQI GLACIER NO. 1 E-BRANCH	1511	2017	3850	3900	0.09	83	-2183	-2100
CN	URUMQI GLACIER NO. 1 E-BRANCH	1511	2017	3800	3850	0.052	73	-2567	-2494
CN	URUMQI GLACIER NO. 1 E-BRANCH	1511	2017	3787	3800	0.006	90	-2489	-2399
CN	URUMQI GLACIER NO. 1 W-BRANCH	1512	2016	4450	4482	0.012	271	587	858
CN	URUMQI GLACIER NO. 1 W-BRANCH	1512	2016	4400	4450	0.023	266	525	791
CN	URUMQI GLACIER NO. 1 W-BRANCH	1512	2016	4350	4400	0.034	258	425	683
CN	URUMQI GLACIER NO. 1 W-BRANCH	1512	2016	4300	4350	0.038	251	317	568
CN	URUMQI GLACIER NO. 1 W-BRANCH	1512	2016	4250	4300	0.034	245	200	445
CN	URUMQI GLACIER NO. 1 W-BRANCH	1512	2016	4200	4250	0.039	236	55	291
CN	URUMQI GLACIER NO. 1 W-BRANCH	1512	2016	4150	4200	0.059	232	-266	-34
CN	URUMQI GLACIER NO. 1 W-BRANCH	1512	2016	4100	4150	0.093	255	-820	-565
CN	URUMQI GLACIER NO. 1 W-BRANCH	1512	2016	4050	4100	0.105	220	-1074	-854
CN	URUMQI GLACIER NO. 1 W-BRANCH	1512	2016	4000	4050	0.07	141	-1690	-1549
CN	URUMQI GLACIER NO. 1 W-BRANCH	1512	2016	3950	4000	0.039	112	-1788	-1676
CN	URUMQI GLACIER NO. 1 W-BRANCH	1512	2016	3900	3950	0.022	31	-2391	-2360
CN	URUMQI GLACIER NO. 1 W-BRANCH	1512	2016	3883	3900	0.005	-10	-2906	-2916
CN	URUMQI GLACIER NO. 1 W-BRANCH	1512	2017	4450	4482	0.012	442	319	761
CN	URUMQI GLACIER NO. 1 W-BRANCH	1512	2017	4400	4450	0.023	435	281	716
CN	URUMQI GLACIER NO. 1 W-BRANCH	1512	2017	4350	4400	0.034	424	204	628

PU	GLACIER_NAME	WGMS_ID	YEAR	ELEV_FROM	ELEV_TO	AREA	BW	BS	BA
CN	URUMQI GLACIER NO. 1 W-BRANCH	1512	2017	4300	4350	0.038	415	117	532
CN	URUMQI GLACIER NO. 1 W-BRANCH	1512	2017	4250	4300	0.034	404	28	432
CN	URUMQI GLACIER NO. 1 W-BRANCH	1512	2017	4200	4250	0.039	394	-79	315
CN	URUMQI GLACIER NO. 1 W-BRANCH	1512	2017	4150	4200	0.059	373	-274	99
CN	URUMQI GLACIER NO. 1 W-BRANCH	1512	2017	4100	4150	0.093	325	-833	-508
CN	URUMQI GLACIER NO. 1 W-BRANCH	1512	2017	4050	4100	0.105	261	-1363	-1102
CN	URUMQI GLACIER NO. 1 W-BRANCH	1512	2017	4000	4050	0.07	156	-1617	-1461
CN	URUMQI GLACIER NO. 1 W-BRANCH	1512	2017	3950	4000	0.039	42	-2029	-1987
CN	URUMQI GLACIER NO. 1 W-BRANCH	1512	2017	3900	3950	0.022	11	-2062	-2051
CN	URUMQI GLACIER NO. 1 W-BRANCH	1512	2017	3883	3900	0.005	14	-2044	-2030
CO - Colombia									
CO	CONEJERAS	2721	2016	4795	4910	0.0198			-3859
CO	CONEJERAS	2721	2016	4735	4795	0.1155			-5700
CO	CONEJERAS	2721	2016	4705	4735	0.019			-6363
CO	CONEJERAS	2721	2016	4671	4705	0.0038			-5521
CO	CONEJERAS	2721	2017	4795	4910	0.0126			-1878
CO	CONEJERAS	2721	2017	4735	4795	0.0781			-3928
CO	CONEJERAS	2721	2017	4680	4735	0.0501			-5391
CO	RITACUBA BLANCO	2763	2016	5120	5170	0.0374			827
CO	RITACUBA BLANCO	2763	2016	5080	5120	0.048			921
CO	RITACUBA BLANCO	2763	2016	5020	5080	0.0855			593
CO	RITACUBA BLANCO	2763	2016	4960	5020	0.0854			-809
CO	RITACUBA BLANCO	2763	2016	4920	4960	0.0477			-1870
CO	RITACUBA BLANCO	2763	2016	4820	4920	0.0581			-2640
CO	RITACUBA BLANCO	2763	2017	5120	5170	0.0374			1096
CO	RITACUBA BLANCO	2763	2017	5080	5120	0.048			1160
CO	RITACUBA BLANCO	2763	2017	5020	5080	0.0855			432
CO	RITACUBA BLANCO	2763	2017	4960	5020	0.0854			689
CO	RITACUBA BLANCO	2763	2017	4920	4960	0.0477			-245
CO	RITACUBA BLANCO	2763	2017	4820	4920	0.0581			-994
EC - Ecuador									
EC	ANTIZANA15ALPHA	1624	2016	5600	5760	0.0376			715
EC	ANTIZANA15ALPHA	1624	2016	5500	5600	0.0235			715
EC	ANTIZANA15ALPHA	1624	2016	5400	5500	0.0289			715
EC	ANTIZANA15ALPHA	1624	2016	5300	5400	0.0343			140
EC	ANTIZANA15ALPHA	1624	2016	5200	5300	0.0343			10
EC	ANTIZANA15ALPHA	1624	2016	5100	5200	0.0572			-550
EC	ANTIZANA15ALPHA	1624	2016	5000	5100	0.0192			-1110
EC	ANTIZANA15ALPHA	1624	2016	4960	5000	0.0199			-1240
EC	ANTIZANA15ALPHA	1624	2016	4910	4960	0.0209			-1870
EC	ANTIZANA15ALPHA	1624	2016	4880	4910	0.0116			-2220
EC	ANTIZANA15ALPHA	1624	2016	4860	4880	0.0004			-2750
EC	ANTIZANA15ALPHA	1624	2017	5600	5760	0.0376			815
EC	ANTIZANA15ALPHA	1624	2017	5500	5600	0.0235			815
EC	ANTIZANA15ALPHA	1624	2017	5400	5500	0.0289			815
EC	ANTIZANA15ALPHA	1624	2017	5300	5400	0.0343			160
EC	ANTIZANA15ALPHA	1624	2017	5200	5300	0.0343			35
EC	ANTIZANA15ALPHA	1624	2017	5100	5200	0.0572			-692
EC	ANTIZANA15ALPHA	1624	2017	5000	5100	0.0196			-1419
EC	ANTIZANA15ALPHA	1624	2017	4960	5000	0.0203			-1690
EC	ANTIZANA15ALPHA	1624	2017	4910	4960	0.0213			-2342
EC	ANTIZANA15ALPHA	1624	2017	4880	4910	0.0118			-3123
EC	ANTIZANA15ALPHA	1624	2017	4860	4880	0.0004			-3957
ES - Spain									
ES	MALADETA	942	2016	3188	3212	0.0052	2492	-2763	-271
ES	MALADETA	942	2016	3162	3188	0.019	2362	-2756	-394
ES	MALADETA	942	2016	3138	3162	0.0326	2233	-2748	-516
ES	MALADETA	942	2016	3112	3138	0.034	2103	-2741	-638
ES	MALADETA	942	2016	3088	3112	0.0351	1974	-2734	-760
ES	MALADETA	942	2016	3062	3088	0.0309	1844	-2727	-882
ES	MALADETA	942	2016	3038	3062	0.0252	1878	-3000	-1122
ES	MALADETA	942	2016	3012	3038	0.016	1830	-3133	-1303
ES	MALADETA	942	2016	2988	3012	0.0093	1782	-3266	-1484
ES	MALADETA	942	2016	2962	2988	0.0082	1776	-3382	-1607
ES	MALADETA	942	2016	2938	2962	0.0059	1770	-3499	-1729
ES	MALADETA	942	2016	2912	2938	0.0051	2074	-3103	-1028
ES	MALADETA	942	2016	2888	2912	0.0032	2224	-2963	-739
ES	MALADETA	942	2016	2862	2888	0.0024	2373	-2823	-450
ES	MALADETA	942	2016	2838	2862	0.0008	2522	-2683	-161
FR - France									
FR	TRE LA TETE	1314	2016	3600	3900	0.1833			1500
FR	TRE LA TETE	1314	2016	3500	3600	0.2841			1400
FR	TRE LA TETE	1314	2016	3400	3500	0.3697			1300
FR	TRE LA TETE	1314	2016	3300	3400	0.7496			1000
FR	TRE LA TETE	1314	2016	3200	3300	0.7572			500
FR	TRE LA TETE	1314	2016	3000	3200	0.9553			-100
FR	TRE LA TETE	1314	2016	2900	3000	0.4117			-500
FR	TRE LA TETE	1314	2016	2800	2900	0.3886			-1500
FR	TRE LA TETE	1314	2016	2700	2800	0.2428			-1900
FR	TRE LA TETE	1314	2016	2600	2700	0.3077			-2200
FR	TRE LA TETE	1314	2016	2500	2600	0.2191			-2600
FR	TRE LA TETE	1314	2016	2400	2500	0.8054			-2900
FR	TRE LA TETE	1314	2016	2300	2400	0.4272			-3300
FR	TRE LA TETE	1314	2016	2000	2300	0.5074			-2700
GL - Greenland									
GL	FREYA	3350	2016	1300	1400	0.0009	419	-499	-80
GL	FREYA	3350	2016	1200	1300	0.1554	485	-522	-37
GL	FREYA	3350	2016	1100	1200	0.1899	604	-621	-17
GL	FREYA	3350	2016	1000	1100	0.2779	639	-674	-35
GL	FREYA	3350	2016	900	1000	0.633	709	-710	-1
GL	FREYA	3350	2016	800	900	0.8036	725	-781	-56

PU	GLACIER_NAME	WGMS_ID	YEAR	ELEV_FROM	ELEV_TO	AREA	BW	BS	BA
GL	FREYA	3350	2016	700	800	1.0643	676	-1018	-342
GL	FREYA	3350	2016	600	700	1.0733	626	-1566	-940
GL	FREYA	3350	2016	500	600	0.5859	546	-1978	-1432
GL	FREYA	3350	2016	400	500	0.3702	618	-1815	-1197
GL	FREYA	3350	2016	300	400	0.1361	680	-1614	-934
GL	FREYA	3350	2016	200	300	0.0137	612	-2002	-1390
GL	FREYA	3350	2017	1300	1400	0.0009	600	-492	108
GL	FREYA	3350	2017	1200	1300	0.1554	621	-451	170
GL	FREYA	3350	2017	1100	1200	0.1899	802	-563	239
GL	FREYA	3350	2017	1000	1100	0.2779	864	-596	268
GL	FREYA	3350	2017	900	1000	0.633	968	-621	347
GL	FREYA	3350	2017	800	900	0.8036	817	-482	335
GL	FREYA	3350	2017	700	800	1.0643	734	-631	103
GL	FREYA	3350	2017	600	700	1.0733	722	-1007	-285
GL	FREYA	3350	2017	500	600	0.5859	596	-1286	-690
GL	FREYA	3350	2017	400	500	0.3702	600	-992	-392
GL	FREYA	3350	2017	300	400	0.1361	616	-686	-70
GL	FREYA	3350	2017	200	300	0.0137	524	-1004	-480
GL	MITTIVAKKAT	1629	2016	800	865	0.67			-900
GL	MITTIVAKKAT	1629	2016	700	800	2.21			-1050
GL	MITTIVAKKAT	1629	2016	600	700	3.91			-1350
GL	MITTIVAKKAT	1629	2016	500	600	2.95			-1600
GL	MITTIVAKKAT	1629	2016	400	500	3.02			-2000
GL	MITTIVAKKAT	1629	2016	300	400	1.94			-2550
GL	MITTIVAKKAT	1629	2016	200	300	1.03			-3300
GL	MITTIVAKKAT	1629	2016	180	200	0.21			-4000
GL	QASIGIANNGUIT	4566	2016	1000	1020	0.0267	1240		-1424
GL	QASIGIANNGUIT	4566	2016	980	1000	0.0207	1240		-1424
GL	QASIGIANNGUIT	4566	2016	960	980	0.0267	1240		-1424
GL	QASIGIANNGUIT	4566	2016	940	960	0.0603	1240		-1424
GL	QASIGIANNGUIT	4566	2016	920	940	0.0646	760		-1424
GL	QASIGIANNGUIT	4566	2016	900	920	0.0646	516		-1821
GL	QASIGIANNGUIT	4566	2016	880	900	0.0888	601		-1500
GL	QASIGIANNGUIT	4566	2016	860	880	0.0457	678		-1460
GL	QASIGIANNGUIT	4566	2016	840	860	0.0284	754		-1421
GL	QASIGIANNGUIT	4566	2016	820	840	0.025	830		-1381
GL	QASIGIANNGUIT	4566	2016	800	820	0.0405	907		-1341
GL	QASIGIANNGUIT	4566	2016	780	800	0.0414	983		-1301
GL	QASIGIANNGUIT	4566	2016	760	780	0.0698	1059		-1262
GL	QASIGIANNGUIT	4566	2016	740	760	0.062	787		-1905
GL	QASIGIANNGUIT	4566	2016	720	740	0.0371	480		-2602
GL	QASIGIANNGUIT	4566	2016	700	720	0.0112	349		-2687
GL	QASIGIANNGUIT	4566	2017	1000	1020	0.0267	924		220
GL	QASIGIANNGUIT	4566	2017	980	1000	0.0207	924		220
GL	QASIGIANNGUIT	4566	2017	960	980	0.0267	924		220
GL	QASIGIANNGUIT	4566	2017	940	960	0.0603	924		220
GL	QASIGIANNGUIT	4566	2017	920	940	0.0646	924		187
GL	QASIGIANNGUIT	4566	2017	900	920	0.0646	1014		101
GL	QASIGIANNGUIT	4566	2017	880	900	0.0888	983		-90
GL	QASIGIANNGUIT	4566	2017	860	880	0.0457	1018		-92
GL	QASIGIANNGUIT	4566	2017	840	860	0.0284	1060		-94
GL	QASIGIANNGUIT	4566	2017	820	840	0.025	1102		-96
GL	QASIGIANNGUIT	4566	2017	800	820	0.0405	1143		-98
GL	QASIGIANNGUIT	4566	2017	780	800	0.0414	1185		-100
GL	QASIGIANNGUIT	4566	2017	760	780	0.0698	1227		-102
GL	QASIGIANNGUIT	4566	2017	740	760	0.062	1139		-336
GL	QASIGIANNGUIT	4566	2017	720	740	0.0371	1014		-650
GL	QASIGIANNGUIT	4566	2017	700	720	0.0112	923		-685
IT - Italy									
IT	CARESER	635	2016	3250	3300	0.011	1242	-2299	-1057
IT	CARESER	635	2016	3200	3250	0.031	1076	-2496	-1420
IT	CARESER	635	2016	3150	3200	0.078	1043	-2560	-1517
IT	CARESER	635	2016	3100	3150	0.191	947	-2546	-1599
IT	CARESER	635	2016	3050	3100	0.651	947	-2422	-1475
IT	CARESER	635	2016	3000	3050	0.203	859	-2932	-2073
IT	CARESER	635	2016	2950	3000	0.149	864	-3491	-2627
IT	CARESER	635	2016	2900	2950	0.035	728	-3772	-3044
IT	CARESER	635	2017	3250	3300	0.007	579	-2901	-2322
IT	CARESER	635	2017	3200	3250	0.024	554	-3073	-2518
IT	CARESER	635	2017	3150	3200	0.054	598	-3217	-2619
IT	CARESER	635	2017	3100	3150	0.16	615	-3088	-2473
IT	CARESER	635	2017	3050	3100	0.608	617	-3112	-2495
IT	CARESER	635	2017	3000	3050	0.181	592	-3778	-3186
IT	CARESER	635	2017	2950	3000	0.096	476	-4384	-3908
IT	CARESER	635	2017	2900	2950	0.014	469	-4780	-4311
IT	CIARDONEY	1264	2016	3120	3160	0.055	2886	3103	-217
IT	CIARDONEY	1264	2016	3080	3120	0.168	1243	2661	-1418
IT	CIARDONEY	1264	2016	3020	3080	0.154	1185	2916	-1731
IT	CIARDONEY	1264	2016	2910	3020	0.09	994	3474	-2480
IT	CIARDONEY	1264	2016	2850	2910	0.101	933	3708	-2775
IT	CIARDONEY	1264	2017	3120	3160	0.055	2847	-3413	-566
IT	CIARDONEY	1264	2017	3080	3120	0.168	2096	-3114	-1018
IT	CIARDONEY	1264	2017	3020	3080	0.154	1880	-3607	-1727
IT	CIARDONEY	1264	2017	2910	3020	0.09	2065	-4144	-2079
IT	CIARDONEY	1264	2017	2850	2910	0.101	2281	-3630	-1349
IT	FONTANA BIANCA / WEISSBRUNNF.	1507	2016	3300	3350	0.0105	1100	-1700	-600
IT	FONTANA BIANCA / WEISSBRUNNF.	1507	2016	3250	3300	0.0271	1111	-1745	-634
IT	FONTANA BIANCA / WEISSBRUNNF.	1507	2016	3200	3250	0.0799	1124	-2156	-1032
IT	FONTANA BIANCA / WEISSBRUNNF.	1507	2016	3150	3200	0.1175	1090	-2548	-1457
IT	FONTANA BIANCA / WEISSBRUNNF.	1507	2016	3100	3150	0.0839	1031	-2622	-1591
IT	FONTANA BIANCA / WEISSBRUNNF.	1507	2016	3050	3100	0.0436	1085	-2565	-1479
IT	FONTANA BIANCA / WEISSBRUNNF.	1507	2016	3000	3050	0.028	1088	-2451	-1363
IT	FONTANA BIANCA / WEISSBRUNNF.	1507	2016	2950	3000	0.0046	963	-2228	-1265
IT	FONTANA BIANCA / WEISSBRUNNF.	1507	2016	2900	2950	0.002	800	-1700	-900
IT	FONTANA BIANCA / WEISSBRUNNF.	1507	2016	2850	2900	0	800	-1700	-900

PU	GLACIER_NAME	WGMS_ID	YEAR	ELEV_FROM	ELEV_TO	AREA	BW	BS	BA
IT	FONTANA BIANCA / WEISSBRUNNF.	1507	2017	3300	3350	0.0105	974	-2674	-1700
IT	FONTANA BIANCA / WEISSBRUNNF.	1507	2017	3250	3300	0.0271	1095	-2811	-1717
IT	FONTANA BIANCA / WEISSBRUNNF.	1507	2017	3200	3250	0.0799	1063	-2793	-1730
IT	FONTANA BIANCA / WEISSBRUNNF.	1507	2017	3150	3200	0.1175	868	-2488	-1620
IT	FONTANA BIANCA / WEISSBRUNNF.	1507	2017	3100	3150	0.0839	937	-2942	-2004
IT	FONTANA BIANCA / WEISSBRUNNF.	1507	2017	3050	3100	0.0436	1146	-3440	-2294
IT	FONTANA BIANCA / WEISSBRUNNF.	1507	2017	3000	3050	0.028	1095	-3578	-2482
IT	FONTANA BIANCA / WEISSBRUNNF.	1507	2017	2950	3000	0.0046	1526	-3926	-2400
IT	FONTANA BIANCA / WEISSBRUNNF.	1507	2017	2900	2950	0.002	1800	-4200	-2400
IT	FONTANA BIANCA / WEISSBRUNNF.	1507	2017	2850	2900	0	1800	-4200	-2400
IT	LA MARE (VEDRETTA DE)	636	2016	3550	3600	0.01	945	-1153	-208
IT	LA MARE (VEDRETTA DE)	636	2016	3500	3550	0.072	963	-1088	-125
IT	LA MARE (VEDRETTA DE)	636	2016	3450	3500	0.111	975	-1131	-155
IT	LA MARE (VEDRETTA DE)	636	2016	3400	3450	0.127	986	-1088	-101
IT	LA MARE (VEDRETTA DE)	636	2016	3350	3400	0.12	993	-1061	-68
IT	LA MARE (VEDRETTA DE)	636	2016	3300	3350	0.164	995	-973	22
IT	LA MARE (VEDRETTA DE)	636	2016	3250	3300	0.201	994	-1028	-34
IT	LA MARE (VEDRETTA DE)	636	2016	3200	3250	0.347	987	-1386	-399
IT	LA MARE (VEDRETTA DE)	636	2016	3150	3200	0.328	978	-1841	-862
IT	LA MARE (VEDRETTA DE)	636	2016	3100	3150	0.173	964	-2180	-1216
IT	LA MARE (VEDRETTA DE)	636	2016	3050	3100	0.115	945	-2481	-1536
IT	LA MARE (VEDRETTA DE)	636	2016	3000	3050	0.096	923	-2630	-1707
IT	LA MARE (VEDRETTA DE)	636	2016	2950	3000	0.071	895	-2887	-1992
IT	LA MARE (VEDRETTA DE)	636	2016	2900	2950	0.033	868	-3247	-2379
IT	LA MARE (VEDRETTA DE)	636	2016	2850	2900	0.012	830	-3063	-2234
IT	LA MARE (VEDRETTA DE)	636	2016	2800	2850	0.01	791	-3353	-2561
IT	LA MARE (VEDRETTA DE)	636	2016	2750	2800	0.003	756	-3235	-2479
IT	LA MARE (VEDRETTA DE)	636	2017	3550	3600	0.01	412	-1653	-1241
IT	LA MARE (VEDRETTA DE)	636	2017	3500	3550	0.072	488	-1756	-1268
IT	LA MARE (VEDRETTA DE)	636	2017	3450	3500	0.111	544	-1864	-1320
IT	LA MARE (VEDRETTA DE)	636	2017	3400	3450	0.127	602	-1902	-1300
IT	LA MARE (VEDRETTA DE)	636	2017	3350	3400	0.12	644	-1804	-1160
IT	LA MARE (VEDRETTA DE)	636	2017	3300	3350	0.164	674	-1967	-1294
IT	LA MARE (VEDRETTA DE)	636	2017	3250	3300	0.201	689	-2059	-1369
IT	LA MARE (VEDRETTA DE)	636	2017	3200	3250	0.347	692	-2380	-1688
IT	LA MARE (VEDRETTA DE)	636	2017	3150	3200	0.328	683	-2814	-2131
IT	LA MARE (VEDRETTA DE)	636	2017	3100	3150	0.173	660	-3165	-2505
IT	LA MARE (VEDRETTA DE)	636	2017	3050	3100	0.115	622	-3374	-2752
IT	LA MARE (VEDRETTA DE)	636	2017	3000	3050	0.096	573	-3533	-2960
IT	LA MARE (VEDRETTA DE)	636	2017	2950	3000	0.071	509	-3768	-3259
IT	LA MARE (VEDRETTA DE)	636	2017	2900	2950	0.033	442	-3895	-3453
IT	LA MARE (VEDRETTA DE)	636	2017	2850	2900	0.012	344	-3835	-3491
IT	LA MARE (VEDRETTA DE)	636	2017	2800	2850	0.01	245	-3849	-3605
IT	LA MARE (VEDRETTA DE)	636	2017	2750	2800	0.003	152	-4117	-3965
IT	LUNGA (VEDRETTA) / LANGENF.	661	2016	3350	3400	0.0091	651	-878	-227
IT	LUNGA (VEDRETTA) / LANGENF.	661	2016	3300	3350	0.0565	950	-1225	-275
IT	LUNGA (VEDRETTA) / LANGENF.	661	2016	3250	3300	0.2354	977	-1170	-193
IT	LUNGA (VEDRETTA) / LANGENF.	661	2016	3200	3250	0.3168	944	-1532	-588
IT	LUNGA (VEDRETTA) / LANGENF.	661	2016	3150	3200	0.1607	838	-1503	-664
IT	LUNGA (VEDRETTA) / LANGENF.	661	2016	3100	3150	0.1774	1034	-1648	-614
IT	LUNGA (VEDRETTA) / LANGENF.	661	2016	3050	3100	0.2131	917	-1882	-965
IT	LUNGA (VEDRETTA) / LANGENF.	661	2016	3000	3050	0.0996	825	-2448	-1623
IT	LUNGA (VEDRETTA) / LANGENF.	661	2016	2950	3000	0.0711	1049	-2528	-1479
IT	LUNGA (VEDRETTA) / LANGENF.	661	2016	2900	2950	0.071	954	-2735	-1780
IT	LUNGA (VEDRETTA) / LANGENF.	661	2016	2850	2900	0.0629	981	-3332	-2351
IT	LUNGA (VEDRETTA) / LANGENF.	661	2016	2800	2850	0.0434	1046	-3842	-2796
IT	LUNGA (VEDRETTA) / LANGENF.	661	2016	2750	2800	0.0512	1066	-4187	-3121
IT	LUNGA (VEDRETTA) / LANGENF.	661	2016	2700	2750	0.0314	1028	-4919	-3891
IT	LUNGA (VEDRETTA) / LANGENF.	661	2017	3350	3400	0.0091	531	-1958	-1427
IT	LUNGA (VEDRETTA) / LANGENF.	661	2017	3300	3350	0.0565	700	-1664	-964
IT	LUNGA (VEDRETTA) / LANGENF.	661	2017	3250	3300	0.2354	725	-1818	-1093
IT	LUNGA (VEDRETTA) / LANGENF.	661	2017	3200	3250	0.3168	670	-2332	-1662
IT	LUNGA (VEDRETTA) / LANGENF.	661	2017	3150	3200	0.1607	709	-2437	-1728
IT	LUNGA (VEDRETTA) / LANGENF.	661	2017	3100	3150	0.1774	815	-2470	-1655
IT	LUNGA (VEDRETTA) / LANGENF.	661	2017	3050	3100	0.2131	774	-2911	-2137
IT	LUNGA (VEDRETTA) / LANGENF.	661	2017	3000	3050	0.0996	689	-3570	-2881
IT	LUNGA (VEDRETTA) / LANGENF.	661	2017	2950	3000	0.0711	799	-3357	-2558
IT	LUNGA (VEDRETTA) / LANGENF.	661	2017	2900	2950	0.071	671	-3432	-2761
IT	LUNGA (VEDRETTA) / LANGENF.	661	2017	2850	2900	0.0629	719	-4228	-3509
IT	LUNGA (VEDRETTA) / LANGENF.	661	2017	2800	2850	0.0434	754	-4828	-4074
IT	LUNGA (VEDRETTA) / LANGENF.	661	2017	2750	2800	0.0512	844	-5078	-4234
IT	LUNGA (VEDRETTA) / LANGENF.	661	2017	2700	2750	0.0314	768	-5474	-4706
IT	MALAVALLE (VEDR. DI) / UEBELTALF.	672	2016	3400	3470	0.081	1418	-1274	144
IT	MALAVALLE (VEDR. DI) / UEBELTALF.	672	2016	3350	3400	0.14	1378	-1181	197
IT	MALAVALLE (VEDR. DI) / UEBELTALF.	672	2016	3300	3350	0.162	1269	-1391	-122
IT	MALAVALLE (VEDR. DI) / UEBELTALF.	672	2016	3250	3300	0.13	1239	-1362	-123
IT	MALAVALLE (VEDR. DI) / UEBELTALF.	672	2016	3200	3250	0.251	1539	-1314	225
IT	MALAVALLE (VEDR. DI) / UEBELTALF.	672	2016	3150	3200	0.612	1546	-1400	146
IT	MALAVALLE (VEDR. DI) / UEBELTALF.	672	2016	3100	3150	0.568	1360	-2088	-728
IT	MALAVALLE (VEDR. DI) / UEBELTALF.	672	2016	3050	3100	0.567	1339	-1891	-552
IT	MALAVALLE (VEDR. DI) / UEBELTALF.	672	2016	3000	3050	0.608	1385	-2434	-1049
IT	MALAVALLE (VEDR. DI) / UEBELTALF.	672	2016	2950	3000	0.579	1265	-2344	-1079
IT	MALAVALLE (VEDR. DI) / UEBELTALF.	672	2016	2900	2950	0.429	1198	-2349	-1151
IT	MALAVALLE (VEDR. DI) / UEBELTALF.	672	2016	2850	2900	0.765	1390	-2550	-1160
IT	MALAVALLE (VEDR. DI) / UEBELTALF.	672	2016	2800	2850	0.429	1340	-2453	-1113
IT	MALAVALLE (VEDR. DI) / UEBELTALF.	672	2016	2750	2800	0.327	1246	-2758	-1512
IT	MALAVALLE (VEDR. DI) / UEBELTALF.	672	2016	2700	2750	0.145	1204	-3544	-2340
IT	MALAVALLE (VEDR. DI) / UEBELTALF.	672	2016	2650	2700	0.205	1012	-4054	-3042
IT	MALAVALLE (VEDR. DI) / UEBELTALF.	672	2016	2560	2650	0.029	800	-4100	-3300
IT	MALAVALLE (VEDR. DI) / UEBELTALF.	672	2017	3400	3470	0.081	1226	-1226	0
IT	MALAVALLE (VEDR. DI) / UEBELTALF.	672	2017	3350	3400	0.14	1210	-1195	15
IT	MALAVALLE (VEDR. DI) / UEBELTALF.	672	2017	3300	3350	0.162	1212	-1460	-248
IT	MALAVALLE (VEDR. DI) / UEBELTALF.	672	2017	3250	3300	0.13	1132	-1568	-436
IT	MALAVALLE (VEDR. DI) / UEBELTALF.	672	2017	3200	3250	0.251	1360	-1391	-31
IT	MALAVALLE (VEDR. DI) / UEBELTALF.	672	2017	3150	3200	0.612	1276	-1822	-546
IT	MALAVALLE (VEDR. DI) / UEBELTALF.	672	2017	3100	3150	0.568	1076	-2374	-1298

PU	GLACIER_NAME	WGMS_ID	YEAR	ELEV_FROM	ELEV_TO	AREA	BW	BS	BA
IT	MALAVALLE (VEDR. DI) / UEBELTALF.	672	2017	3050	3100	0.567	1354	-2400	-1046
IT	MALAVALLE (VEDR. DI) / UEBELTALF.	672	2017	3000	3050	0.608	1139	-2312	-1173
IT	MALAVALLE (VEDR. DI) / UEBELTALF.	672	2017	2950	3000	0.579	1034	-2516	-1482
IT	MALAVALLE (VEDR. DI) / UEBELTALF.	672	2017	2900	2950	0.429	1036	-2213	-1177
IT	MALAVALLE (VEDR. DI) / UEBELTALF.	672	2017	2850	2900	0.765	1034	-2671	-1637
IT	MALAVALLE (VEDR. DI) / UEBELTALF.	672	2017	2800	2850	0.429	903	-2438	-1535
IT	MALAVALLE (VEDR. DI) / UEBELTALF.	672	2017	2750	2800	0.327	890	-2780	-1890
IT	MALAVALLE (VEDR. DI) / UEBELTALF.	672	2017	2700	2750	0.145	792	-3027	-2235
IT	MALAVALLE (VEDR. DI) / UEBELTALF.	672	2017	2650	2700	0.205	577	-2972	-2395
IT	MALAVALLE (VEDR. DI) / UEBELTALF.	672	2017	2560	2650	0.029	400	-3350	-2950
IT	PENDENTE (VEDR.) / HANGENDERF.	675	2016	2900	2950	0.05	1708	-2121	-413
IT	PENDENTE (VEDR.) / HANGENDERF.	675	2016	2850	2900	0.166	1792	-2396	-302
IT	PENDENTE (VEDR.) / HANGENDERF.	675	2016	2800	2850	0.137	1788	-2946	-1111
IT	PENDENTE (VEDR.) / HANGENDERF.	675	2016	2750	2800	0.188	1563	-3039	-1476
IT	PENDENTE (VEDR.) / HANGENDERF.	675	2016	2700	2750	0.212	1563	-3178	-1615
IT	PENDENTE (VEDR.) / HANGENDERF.	675	2016	2650	2700	0.088	1396	-3187	-1791
IT	PENDENTE (VEDR.) / HANGENDERF.	675	2016	2625	2650	0.006	1204	-3200	-1996
IT	PENDENTE (VEDR.) / HANGENDERF.	675	2017	2900	2950	0.054	1591	-2077	-486
IT	PENDENTE (VEDR.) / HANGENDERF.	675	2017	2850	2900	0.167	1517	-2174	-657
IT	PENDENTE (VEDR.) / HANGENDERF.	675	2017	2800	2850	0.137	1349	-2359	-1010
IT	PENDENTE (VEDR.) / HANGENDERF.	675	2017	2750	2800	0.188	1158	-3478	-2320
IT	PENDENTE (VEDR.) / HANGENDERF.	675	2017	2700	2750	0.212	1054	-3096	-2042
IT	PENDENTE (VEDR.) / HANGENDERF.	675	2017	2650	2700	0.088	814	-3040	-2226
IT	PENDENTE (VEDR.) / HANGENDERF.	675	2017	2625	2650	0.006	784	-3104	-2320
IT	RIES OCC. (VEDR. DI) / RIESERF. WESTL.	645	2016	3200	3250	0.016	1270	-1170	100
IT	RIES OCC. (VEDR. DI) / RIESERF. WESTL.	645	2016	3150	3200	0.178	1170	-1076	94
IT	RIES OCC. (VEDR. DI) / RIESERF. WESTL.	645	2016	3100	3150	0.215	1040	-1086	-46
IT	RIES OCC. (VEDR. DI) / RIESERF. WESTL.	645	2016	3050	3100	0.257	1044	-1880	-835
IT	RIES OCC. (VEDR. DI) / RIESERF. WESTL.	645	2016	3000	3050	0.263	1077	-1779	-701
IT	RIES OCC. (VEDR. DI) / RIESERF. WESTL.	645	2016	2950	3000	0.243	998	-1855	-857
IT	RIES OCC. (VEDR. DI) / RIESERF. WESTL.	645	2016	2900	2950	0.242	959	-2122	-1162
IT	RIES OCC. (VEDR. DI) / RIESERF. WESTL.	645	2016	2850	2900	0.156	956	-2311	-1355
IT	RIES OCC. (VEDR. DI) / RIESERF. WESTL.	645	2016	2800	2850	0.11	877	-2826	-1949
IT	RIES OCC. (VEDR. DI) / RIESERF. WESTL.	645	2016	2750	2800	0.015	800	-3297	-2497
IT	RIES OCC. (VEDR. DI) / RIESERF. WESTL.	645	2017	3200	3250	0.0158	1262	-2247	-984
IT	RIES OCC. (VEDR. DI) / RIESERF. WESTL.	645	2017	3150	3200	0.1777	1073	-1987	-914
IT	RIES OCC. (VEDR. DI) / RIESERF. WESTL.	645	2017	3100	3150	0.2154	1004	-1826	-822
IT	RIES OCC. (VEDR. DI) / RIESERF. WESTL.	645	2017	3050	3100	0.2567	983	-1940	-957
IT	RIES OCC. (VEDR. DI) / RIESERF. WESTL.	645	2017	3000	3050	0.2631	994	-2083	-1089
IT	RIES OCC. (VEDR. DI) / RIESERF. WESTL.	645	2017	2950	3000	0.2435	1011	-2137	-1126
IT	RIES OCC. (VEDR. DI) / RIESERF. WESTL.	645	2017	2900	2950	0.2421	1038	-2368	-1329
IT	RIES OCC. (VEDR. DI) / RIESERF. WESTL.	645	2017	2850	2900	0.156	936	-2850	-1914
IT	RIES OCC. (VEDR. DI) / RIESERF. WESTL.	645	2017	2800	2850	0.1097	919	-3361	-2442
IT	RIES OCC. (VEDR. DI) / RIESERF. WESTL.	645	2017	2750	2800	0.0151	801	-4197	-3396
KG - Kyrgyzstan									
KG	ABRAMOV	732	2016	4800	4900	0.0908	1080	-983	97
KG	ABRAMOV	732	2016	4700	4800	0.1254	1182	-1042	140
KG	ABRAMOV	732	2016	4600	4700	0.2486	1338	-1135	203
KG	ABRAMOV	732	2016	4500	4600	0.9987	1597	-1424	173
KG	ABRAMOV	732	2016	4400	4500	2.3498	2042	-1604	438
KG	ABRAMOV	732	2016	4300	4400	4.4424	2124	-1744	380
KG	ABRAMOV	732	2016	4200	4300	5.3244	2074	-1855	219
KG	ABRAMOV	732	2016	4100	4200	4.4553	1838	-2046	-208
KG	ABRAMOV	732	2016	4000	4100	2.6589	1492	-2378	-886
KG	ABRAMOV	732	2016	3900	4000	1.6537	1031	-2772	-1741
KG	ABRAMOV	732	2016	3800	3900	0.9814	591	-3253	-2662
KG	ABRAMOV	732	2016	3700	3800	0.4929	385	-3563	-3178
KG	ABRAMOV	732	2016	3600	3700	0.1081	354	-3589	-3235
KG	ABRAMOV	732	2017	4800	4900	0.0908	947	-142	805
KG	ABRAMOV	732	2017	4700	4800	0.1254	1076	-232	844
KG	ABRAMOV	732	2017	4600	4700	0.2486	1199	-376	823
KG	ABRAMOV	732	2017	4500	4600	0.9987	1423	-676	747
KG	ABRAMOV	732	2017	4400	4500	2.3498	1812	-961	851
KG	ABRAMOV	732	2017	4300	4400	4.4424	1900	-1269	631
KG	ABRAMOV	732	2017	4200	4300	5.3244	1866	-1569	297
KG	ABRAMOV	732	2017	4100	4200	4.4553	1668	-2060	-392
KG	ABRAMOV	732	2017	4000	4100	2.6589	1371	-2839	-1468
KG	ABRAMOV	732	2017	3900	4000	1.6537	968	-3451	-2483
KG	ABRAMOV	732	2017	3800	3900	0.9814	586	-4183	-3597
KG	ABRAMOV	732	2017	3700	3800	0.4929	388	-4858	-4470
KG	ABRAMOV	732	2017	3600	3700	0.1081	334	-5151	-4817
KG	BATYSH SOOK/SYEK ZAPADNIY	781	2016	4400	4500	0.0752	261	40	301
KG	BATYSH SOOK/SYEK ZAPADNIY	781	2016	4300	4400	0.2004	458	138	596
KG	BATYSH SOOK/SYEK ZAPADNIY	781	2016	4200	4300	0.3256	285	-346	-61
KG	BATYSH SOOK/SYEK ZAPADNIY	781	2016	4100	4200	0.2968	102	-981	-879
KG	BATYSH SOOK/SYEK ZAPADNIY	781	2016	4000	4100	0.168	24	-1520	-1496
KG	BATYSH SOOK/SYEK ZAPADNIY	781	2016	3900	4000	0.0416	-35	-1904	-1939
KG	BATYSH SOOK/SYEK ZAPADNIY	781	2017	4400	4500	0.0752	232	-277	-45
KG	BATYSH SOOK/SYEK ZAPADNIY	781	2017	4300	4400	0.2004	404	-312	92
KG	BATYSH SOOK/SYEK ZAPADNIY	781	2017	4200	4300	0.3256	239	-809	-570
KG	BATYSH SOOK/SYEK ZAPADNIY	781	2017	4100	4200	0.2968	61	-1359	-1298
KG	BATYSH SOOK/SYEK ZAPADNIY	781	2017	4000	4100	0.168	-37	-1836	-1873
KG	BATYSH SOOK/SYEK ZAPADNIY	781	2017	3900	4000	0.0416	-119	-2186	-2305
KG	BORDU	829	2016	4500	4800	0.348	890	-480	410
KG	BORDU	829	2016	4400	4500	0.474	860	-490	370
KG	BORDU	829	2016	4300	4400	0.933	500	-840	-340
KG	BORDU	829	2016	4200	4300	1.001	450	-810	-360
KG	BORDU	829	2016	4100	4200	1.095	470	-950	-480
KG	BORDU	829	2016	4000	4100	0.819	290	-1230	-940
KG	BORDU	829	2016	3800	4000	0.287	240	-2100	-1860
KG	BORDU	829	2017	4500	4800	0.34	450	-550	-100
KG	BORDU	829	2017	4400	4500	0.462	400	-610	-210
KG	BORDU	829	2017	4300	4400	0.934	240	-1290	-1050
KG	BORDU	829	2017	4200	4300	0.996	280	-1490	-1210
KG	BORDU	829	2017	4100	4200	1.084	180	-1870	-1690

PU	GLACIER_NAME	WGMS_ID	YEAR	ELEV_FROM	ELEV_TO	AREA	BW	BS	BA
KG	BORDU	829	2017	4000	4100	0.804	140	-2110	-1970
KG	BORDU	829	2017	3800	4000	0.294	80	-2930	-2850
KG	GLACIER NO. 354 (AKSHIYRAK)	3889	2016	4600	4700	0.0408	631	669	1300
KG	GLACIER NO. 354 (AKSHIYRAK)	3889	2016	4500	4600	0.1632	678	659	1337
KG	GLACIER NO. 354 (AKSHIYRAK)	3889	2016	4400	4500	0.3744	698	565	1263
KG	GLACIER NO. 354 (AKSHIYRAK)	3889	2016	4300	4400	0.6976	694	395	1089
KG	GLACIER NO. 354 (AKSHIYRAK)	3889	2016	4200	4300	1.4336	572	28	600
KG	GLACIER NO. 354 (AKSHIYRAK)	3889	2016	4100	4200	1.5764	422	-529	-107
KG	GLACIER NO. 354 (AKSHIYRAK)	3889	2016	4000	4100	1.1256	189	-1338	-1149
KG	GLACIER NO. 354 (AKSHIYRAK)	3889	2016	3900	4000	0.6408	47	-1986	-1939
KG	GLACIER NO. 354 (AKSHIYRAK)	3889	2016	3800	3900	0.3248	-20	-2546	-2566
KG	GLACIER NO. 354 (AKSHIYRAK)	3889	2016	3700	3800	0.0336	-42	-3541	-3583
KG	GLACIER NO. 354 (AKSHIYRAK)	3889	2017	4600	4700	0.0668	880	74	954
KG	GLACIER NO. 354 (AKSHIYRAK)	3889	2017	4500	4600	0.1724	902	-9	893
KG	GLACIER NO. 354 (AKSHIYRAK)	3889	2017	4400	4500	0.4712	952	-155	797
KG	GLACIER NO. 354 (AKSHIYRAK)	3889	2017	4300	4400	0.9476	884	-421	463
KG	GLACIER NO. 354 (AKSHIYRAK)	3889	2017	4200	4300	1.608	706	-708	-2
KG	GLACIER NO. 354 (AKSHIYRAK)	3889	2017	4100	4200	1.6248	399	-1297	-898
KG	GLACIER NO. 354 (AKSHIYRAK)	3889	2017	4000	4100	0.8384	138	-2122	-1984
KG	GLACIER NO. 354 (AKSHIYRAK)	3889	2017	3900	4000	0.5428	-97	-2834	-2931
KG	GLACIER NO. 354 (AKSHIYRAK)	3889	2017	3800	3900	0.1108	-157	-3221	-3378
KG	GLACIER NO. 599 (KJUNGEI ALA-TOO)	10402	2016	4200	4300	0.102			2427
KG	GLACIER NO. 599 (KJUNGEI ALA-TOO)	10402	2016	4100	4200	0.248			1496
KG	GLACIER NO. 599 (KJUNGEI ALA-TOO)	10402	2016	4000	4100	0.412			351
KG	GLACIER NO. 599 (KJUNGEI ALA-TOO)	10402	2016	3900	4000	0.661			-2199
KG	GLACIER NO. 599 (KJUNGEI ALA-TOO)	10402	2016	3800	3900	0.087			-3785
KG	GLACIER NO. 599 (KJUNGEI ALA-TOO)	10402	2016	3700	3800	0.022			-4250
KG	GOLUBIN	753	2016	4300	4350	0.0116	1174	-455	719
KG	GOLUBIN	753	2016	4200	4300	0.2756	1542	-471	1071
KG	GOLUBIN	753	2016	4100	4200	0.5368	1588	-564	1024
KG	GOLUBIN	753	2016	4000	4100	1.084	1833	-736	1097
KG	GOLUBIN	753	2016	3900	4000	1.0632	1627	-941	686
KG	GOLUBIN	753	2016	3800	3900	0.9632	1574	-1105	469
KG	GOLUBIN	753	2016	3700	3800	0.3028	1189	-1231	-42
KG	GOLUBIN	753	2016	3600	3700	0.5932	667	-1914	-1247
KG	GOLUBIN	753	2016	3500	3600	0.3604	168	-2363	-2195
KG	GOLUBIN	753	2016	3400	3500	0.2236	-1031	-2805	-3836
KG	GOLUBIN	753	2016	3325	3400	0.0292	-904	-3038	-3942
KG	GOLUBIN	753	2017	4300	4350	0.0196	1505	-1120	385
KG	GOLUBIN	753	2017	4200	4300	0.2668	1770	-1124	646
KG	GOLUBIN	753	2017	4100	4200	0.5536	1854	-1069	785
KG	GOLUBIN	753	2017	4000	4100	1.0892	2137	-1212	925
KG	GOLUBIN	753	2017	3900	4000	1.0884	1814	-1332	482
KG	GOLUBIN	753	2017	3800	3900	0.92	1749	-1552	197
KG	GOLUBIN	753	2017	3700	3800	0.3416	1280	-1505	-225
KG	GOLUBIN	753	2017	3600	3700	0.5552	554	-2261	-1707
KG	GOLUBIN	753	2017	3500	3600	0.3628	-26	-2579	-2605
KG	GOLUBIN	753	2017	3400	3500	0.2384	-1626	-2827	-4453
KG	GOLUBIN	753	2017	3325	3400	0.018	-1644	-3035	-4679
KG	KARA-BATKAK	813	2016	4200	4900	0.458	420	0	420
KG	KARA-BATKAK	813	2016	4100	4200	0.319	940	-340	600
KG	KARA-BATKAK	813	2016	4000	4100	0.261	680	-210	470
KG	KARA-BATKAK	813	2016	3900	4000	0.301	510	-1060	-550
KG	KARA-BATKAK	813	2016	3800	3900	0.378	460	-800	-340
KG	KARA-BATKAK	813	2016	3700	3800	0.245	510	-910	-400
KG	KARA-BATKAK	813	2016	3600	3700	0.145	500	-1460	-960
KG	KARA-BATKAK	813	2016	3500	3600	0.079	360	-2280	-1920
KG	KARA-BATKAK	813	2016	3400	3500	0.272	510	-2960	-2450
KG	KARA-BATKAK	813	2016	3200	3400	0.042	430	-3650	-3220
KG	KARA-BATKAK	813	2017	4200	4800	0.452	350	-70	280
KG	KARA-BATKAK	813	2017	4100	4200	0.315	840	-230	600
KG	KARA-BATKAK	813	2017	4000	4100	0.246	590	-180	410
KG	KARA-BATKAK	813	2017	3900	4000	0.3	490	-2220	-1730
KG	KARA-BATKAK	813	2017	3800	3900	0.382	510	-2380	-1870
KG	KARA-BATKAK	813	2017	3700	3800	0.241	680	-3110	-2440
KG	KARA-BATKAK	813	2017	3600	3700	0.147	670	-2840	-2170
KG	KARA-BATKAK	813	2017	3500	3600	0.077	480	-3210	-2720
KG	KARA-BATKAK	813	2017	3400	3500	0.273	540	-3190	-2650
KG	KARA-BATKAK	813	2017	3300	3400	0.034	510	-3950	-3440
KG	SARY TOR (NO.356)	805	2016	4500	4800	0.378	650	-690	-40
KG	SARY TOR (NO.356)	805	2016	4400	4500	0.351	630	-680	-50
KG	SARY TOR (NO.356)	805	2016	4300	4400	0.726	390	-1490	-1100
KG	SARY TOR (NO.356)	805	2016	4200	4300	0.425	330	-1200	-870
KG	SARY TOR (NO.356)	805	2016	4100	4200	0.409	320	-1080	-760
KG	SARY TOR (NO.356)	805	2016	4000	4100	0.305	290	-1720	-1430
KG	SARY TOR (NO.356)	805	2016	3900	4000	0.054	250	-2960	-2710
KG	SARY TOR (NO.356)	805	2017	4500	4800	0.303	280	-930	-650
KG	SARY TOR (NO.356)	805	2017	4400	4500	0.292	270	-940	-670
KG	SARY TOR (NO.356)	805	2017	4300	4400	0.673	180	-1640	-1460
KG	SARY TOR (NO.356)	805	2017	4200	4300	0.49	160	-1540	-1390
KG	SARY TOR (NO.356)	805	2017	4100	4200	0.46	180	-1990	-1810
KG	SARY TOR (NO.356)	805	2017	4000	4100	0.346	90	-2340	-2260
KG	SARY TOR (NO.356)	805	2017	3900	4000	0.08	80	-3190	-3110
KZ - Kazakhstan									
KZ	TS.TUYUKSUYSKIY	817	2016	4100	4200	0.161	447	866	1313
KZ	TS.TUYUKSUYSKIY	817	2016	4000	4100	0.314	827	611	1438
KZ	TS.TUYUKSUYSKIY	817	2016	3900	4000	0.233	1039	817	1857
KZ	TS.TUYUKSUYSKIY	817	2016	3800	3900	0.312	1240	180	1421
KZ	TS.TUYUKSUYSKIY	817	2016	3750	3800	0.31	1154	-620	534
KZ	TS.TUYUKSUYSKIY	817	2016	3700	3750	0.386	1088	-1172	-84
KZ	TS.TUYUKSUYSKIY	817	2016	3650	3700	0.236	1045	-1534	-489
KZ	TS.TUYUKSUYSKIY	817	2016	3600	3650	0.1	1050	-1654	-604
KZ	TS.TUYUKSUYSKIY	817	2016	3550	3600	0.124	1075	-1964	-889
KZ	TS.TUYUKSUYSKIY	817	2016	3500	3550	0.089	1009	-2290	-1281
KZ	TS.TUYUKSUYSKIY	817	2017	4100	4200	0.1611	305	-6	298

PU	GLACIER_NAME	WGMS_ID	YEAR	ELEV_FROM	ELEV_TO	AREA	BW	BS	BA
KZ	TS.TUYUKSUYSKIY	817	2017	4000	4100	0.3138	564	-284	280
KZ	TS.TUYUKSUYSKIY	817	2017	3900	4000	0.2332	709	-709	0
KZ	TS.TUYUKSUYSKIY	817	2017	3800	3900	0.3121	846	-1546	-700
KZ	TS.TUYUKSUYSKIY	817	2017	3750	3800	0.3099	810	-2371	-1561
KZ	TS.TUYUKSUYSKIY	817	2017	3700	3750	0.3862	723	-2592	-1868
KZ	TS.TUYUKSUYSKIY	817	2017	3650	3700	0.236	638	-2667	-2029
KZ	TS.TUYUKSUYSKIY	817	2017	3600	3650	0.1074	707	-2819	-2112
KZ	TS.TUYUKSUYSKIY	817	2017	3550	3600	0.1172	785	-3205	-2420
KZ	TS.TUYUKSUYSKIY	817	2017	3500	3550	0.0787	758	-3711	-2953
NO - Norway									
NO	AALFOTBREEN	317	2017	1300	1368	0.902	3150	-3075	75
NO	AALFOTBREEN	317	2017	1250	1300	0.782	3275	-3375	-100
NO	AALFOTBREEN	317	2017	1200	1250	0.699	3375	-3775	-400
NO	AALFOTBREEN	317	2017	1150	1200	0.577	3475	-4300	-825
NO	AALFOTBREEN	317	2017	1100	1150	0.448	3500	-4850	-1350
NO	AALFOTBREEN	317	2017	1050	1100	0.295	3350	-5400	-2050
NO	AALFOTBREEN	317	2017	1000	1050	0.183	2725	-5900	-3175
NO	AALFOTBREEN	317	2017	950	1000	0.075	1850	-6375	-4525
NO	AALFOTBREEN	317	2017	890	950	0.014	800	-6900	-6100
NO	AUSTDALSBREEN	321	2016	1700	1747	0.126	2000	-2500	-500
NO	AUSTDALSBREEN	321	2016	1650	1700	0.139	2130	-2550	-420
NO	AUSTDALSBREEN	321	2016	1600	1650	0.182	2200	-2550	-350
NO	AUSTDALSBREEN	321	2016	1550	1600	1.892	2260	-2600	-340
NO	AUSTDALSBREEN	321	2016	1500	1550	2.792	2280	-2600	-320
NO	AUSTDALSBREEN	321	2016	1450	1500	1.604	2130	-2700	-570
NO	AUSTDALSBREEN	321	2016	1400	1450	1.378	1970	-3000	-1030
NO	AUSTDALSBREEN	321	2016	1350	1400	0.931	1630	-3400	-1770
NO	AUSTDALSBREEN	321	2016	1300	1350	0.821	1410	-3800	-2390
NO	AUSTDALSBREEN	321	2016	1250	1300	0.536	1290	-4300	-3010
NO	AUSTDALSBREEN	321	2016	1200	1250	0.228	1200	-4800	-3600
NO	AUSTDALSBREEN	321	2017	1700	1747	0.126	1700	-1250	450
NO	AUSTDALSBREEN	321	2017	1650	1700	0.139	1900	-1350	550
NO	AUSTDALSBREEN	321	2017	1600	1650	0.182	2200	-1500	700
NO	AUSTDALSBREEN	321	2017	1550	1600	1.892	2650	-1600	1050
NO	AUSTDALSBREEN	321	2017	1500	1550	2.792	2700	-1700	1000
NO	AUSTDALSBREEN	321	2017	1450	1500	1.604	2600	-1800	800
NO	AUSTDALSBREEN	321	2017	1400	1450	1.378	2500	-2200	300
NO	AUSTDALSBREEN	321	2017	1350	1400	0.931	2000	-2600	-600
NO	AUSTDALSBREEN	321	2017	1300	1350	0.821	1850	-3000	-1150
NO	AUSTDALSBREEN	321	2017	1250	1300	0.536	1700	-3400	-1700
NO	AUSTDALSBREEN	321	2017	1200	1250	0.228	1550	-3800	-2250
NO	BLOMSTOELSKARDSBREEN	3339	2016	1600	1632	1.166	3625	-2250	1375
NO	BLOMSTOELSKARDSBREEN	3339	2016	1550	1600	6.335	3725	-2275	1450
NO	BLOMSTOELSKARDSBREEN	3339	2016	1500	1550	4.131	3800	-2375	1425
NO	BLOMSTOELSKARDSBREEN	3339	2016	1450	1500	2.192	3625	-2525	1100
NO	BLOMSTOELSKARDSBREEN	3339	2016	1400	1450	1.556	3550	-2700	850
NO	BLOMSTOELSKARDSBREEN	3339	2016	1350	1400	1.755	3550	-2950	600
NO	BLOMSTOELSKARDSBREEN	3339	2016	1300	1350	1.458	3275	-3200	75
NO	BLOMSTOELSKARDSBREEN	3339	2016	1250	1300	0.781	2900	-3475	-575
NO	BLOMSTOELSKARDSBREEN	3339	2016	1200	1250	1.278	2500	-3725	-1225
NO	BLOMSTOELSKARDSBREEN	3339	2016	1150	1200	1.003	2150	-3975	-1825
NO	BLOMSTOELSKARDSBREEN	3339	2016	1100	1150	0.445	1900	-4200	-2300
NO	BLOMSTOELSKARDSBREEN	3339	2016	1012	1100	0.304	1550	-4550	-3000
NO	BLOMSTOELSKARDSBREEN	3339	2017	1600	1634	1.269	3149	-2170	979
NO	BLOMSTOELSKARDSBREEN	3339	2017	1550	1600	6.467	2949	-2320	629
NO	BLOMSTOELSKARDSBREEN	3339	2017	1500	1550	4.082	2849	-2520	329
NO	BLOMSTOELSKARDSBREEN	3339	2017	1450	1500	2.121	2774	-2745	29
NO	BLOMSTOELSKARDSBREEN	3339	2017	1400	1450	1.547	2649	-3020	-371
NO	BLOMSTOELSKARDSBREEN	3339	2017	1350	1400	1.794	2424	-3320	-896
NO	BLOMSTOELSKARDSBREEN	3339	2017	1300	1350	1.405	2124	-3620	-1496
NO	BLOMSTOELSKARDSBREEN	3339	2017	1250	1300	0.806	1924	-3895	-1971
NO	BLOMSTOELSKARDSBREEN	3339	2017	1200	1250	1.263	1749	-4120	-2371
NO	BLOMSTOELSKARDSBREEN	3339	2017	1150	1200	1.003	1474	-4295	-2821
NO	BLOMSTOELSKARDSBREEN	3339	2017	1100	1150	0.464	1099	-4470	-3371
NO	BLOMSTOELSKARDSBREEN	3339	2017	1011	1100	0.318	474	-4670	-4196
NO	ENGABREEN	298	2016	1500	1544	0.048	2900	-2100	800
NO	ENGABREEN	298	2016	1400	1500	2.129	3200	-2100	1100
NO	ENGABREEN	298	2016	1300	1400	9.241	3400	-2200	1200
NO	ENGABREEN	298	2016	1200	1300	8.044	3000	-2400	600
NO	ENGABREEN	298	2016	1100	1200	7.572	2400	-2900	-500
NO	ENGABREEN	298	2016	1000	1100	4.607	2300	-3400	-1100
NO	ENGABREEN	298	2016	900	1000	2.431	1400	-4000	-2600
NO	ENGABREEN	298	2016	800	900	0.797	1150	-4700	-3550
NO	ENGABREEN	298	2016	700	800	0.455	900	-5400	-4500
NO	ENGABREEN	298	2016	600	700	0.285	650	-6100	-5450
NO	ENGABREEN	298	2016	500	600	0.245	400	-6800	-6400
NO	ENGABREEN	298	2016	400	500	0.144	150	-7500	-7350
NO	ENGABREEN	298	2016	300	400	0.099	-100	-8200	-8300
NO	ENGABREEN	298	2016	200	300	0.117	-400	-8800	-9200
NO	ENGABREEN	298	2016	111	200	0.035	-700	-9500	-10200
NO	ENGABREEN	298	2017	1500	1544	0.048	3800	-1800	2000
NO	ENGABREEN	298	2017	1400	1500	2.129	4250	-1750	2500
NO	ENGABREEN	298	2017	1300	1400	9.241	4350	-1800	2550
NO	ENGABREEN	298	2017	1200	1300	8.044	4200	-1950	2250
NO	ENGABREEN	298	2017	1100	1200	7.572	3300	-2300	1000
NO	ENGABREEN	298	2017	1000	1100	4.607	3200	-2900	300
NO	ENGABREEN	298	2017	900	1000	2.431	2700	-3600	-900
NO	ENGABREEN	298	2017	800	900	0.797	2300	-4300	-2000
NO	ENGABREEN	298	2017	700	800	0.455	1900	-5000	-3100
NO	ENGABREEN	298	2017	600	700	0.285	1500	-5700	-4200
NO	ENGABREEN	298	2017	500	600	0.245	1100	-6400	-5300
NO	ENGABREEN	298	2017	400	500	0.144	700	-7100	-6400
NO	ENGABREEN	298	2017	300	400	0.099	250	-7900	-7650
NO	ENGABREEN	298	2017	200	300	0.117	-200	-8700	-8900
NO	ENGABREEN	298	2017	111	200	0.035	-600	-9400	-10000

PU	GLACIER_NAME	WGMS_ID	YEAR	ELEV_FROM	ELEV_TO	AREA	BW	BS	BA
NO	GRAASUBREEN	299	2016	2250	2283	0.031	576	-600	-24
NO	GRAASUBREEN	299	2016	2200	2250	0.153	617	-700	-83
NO	GRAASUBREEN	299	2016	2150	2200	0.255	572	-900	-328
NO	GRAASUBREEN	299	2016	2100	2150	0.353	613	-1100	-487
NO	GRAASUBREEN	299	2016	2050	2100	0.362	641	-1200	-559
NO	GRAASUBREEN	299	2016	2000	2050	0.405	829	-1250	-421
NO	GRAASUBREEN	299	2016	1950	2000	0.32	988	-1350	-362
NO	GRAASUBREEN	299	2016	1900	1950	0.127	963	-1500	-537
NO	GRAASUBREEN	299	2016	1833	1900	0.113	1217	-1700	-483
NO	GRAASUBREEN	299	2017	2250	2283	0.031	670	-200	470
NO	GRAASUBREEN	299	2017	2200	2250	0.153	290	-450	-160
NO	GRAASUBREEN	299	2017	2150	2200	0.255	260	-750	-490
NO	GRAASUBREEN	299	2017	2100	2150	0.353	150	-900	-750
NO	GRAASUBREEN	299	2017	2050	2100	0.362	0	-1000	-1000
NO	GRAASUBREEN	299	2017	2000	2050	0.405	160	-1100	-940
NO	GRAASUBREEN	299	2017	1950	2000	0.32	390	-1150	-760
NO	GRAASUBREEN	299	2017	1900	1950	0.127	620	-1200	-580
NO	GRAASUBREEN	299	2017	1833	1900	0.113	880	-1250	-370
NO	HANSEBREEN	322	2016	1250	1310	0.496	3850	-4625	-775
NO	HANSEBREEN	322	2016	1200	1250	0.418	4200	-4850	-650
NO	HANSEBREEN	322	2016	1150	1200	0.474	4125	-5050	-925
NO	HANSEBREEN	322	2016	1100	1150	0.543	3750	-5250	-1500
NO	HANSEBREEN	322	2016	1050	1100	0.495	3350	-5425	-2075
NO	HANSEBREEN	322	2016	1000	1050	0.206	3450	-5575	-2125
NO	HANSEBREEN	322	2016	950	1000	0.098	3875	-5725	-1850
NO	HANSEBREEN	322	2016	927	950	0.02	4250	-5825	-1575
NO	HANSEBREEN	322	2017	1250	1310	0.496	3775	-3875	-100
NO	HANSEBREEN	322	2017	1200	1250	0.418	3950	-4225	-275
NO	HANSEBREEN	322	2017	1150	1200	0.474	3875	-4555	-680
NO	HANSEBREEN	322	2017	1100	1150	0.543	3475	-4875	-1400
NO	HANSEBREEN	322	2017	1050	1100	0.495	2800	-5150	-2350
NO	HANSEBREEN	322	2017	1000	1050	0.206	2800	-5375	-2575
NO	HANSEBREEN	322	2017	950	1000	0.098	3000	-5575	-2575
NO	HANSEBREEN	322	2017	927	950	0.02	3200	-5725	-2525
NO	HELLSTUGUBREEN	300	2016	2150	2229	0.02	1500	-600	900
NO	HELLSTUGUBREEN	300	2016	2100	2150	0.08	1590	-700	890
NO	HELLSTUGUBREEN	300	2016	2050	2100	0.291	1479	-750	729
NO	HELLSTUGUBREEN	300	2016	2000	2050	0.181	1300	-900	400
NO	HELLSTUGUBREEN	300	2016	1950	2000	0.307	1325	-1100	225
NO	HELLSTUGUBREEN	300	2016	1900	1950	0.603	1208	-1300	-92
NO	HELLSTUGUBREEN	300	2016	1850	1900	0.373	1170	-1500	-330
NO	HELLSTUGUBREEN	300	2016	1800	1850	0.332	1142	-1700	-558
NO	HELLSTUGUBREEN	300	2016	1750	1800	0.157	1108	-2000	-892
NO	HELLSTUGUBREEN	300	2016	1700	1750	0.088	1087	-2200	-1113
NO	HELLSTUGUBREEN	300	2016	1650	1700	0.139	1011	-2400	-1389
NO	HELLSTUGUBREEN	300	2016	1600	1650	0.114	1078	-2700	-1622
NO	HELLSTUGUBREEN	300	2016	1550	1600	0.124	921	-2850	-1929
NO	HELLSTUGUBREEN	300	2016	1500	1550	0.083	850	-3050	-2200
NO	HELLSTUGUBREEN	300	2016	1482	1500	0.011	800	-3250	-2450
NO	HELLSTUGUBREEN	300	2017	2150	2229	0.02	1200	-200	1000
NO	HELLSTUGUBREEN	300	2017	2100	2150	0.08	1100	-300	800
NO	HELLSTUGUBREEN	300	2017	2050	2100	0.291	1200	-500	700
NO	HELLSTUGUBREEN	300	2017	2000	2050	0.181	1100	-670	430
NO	HELLSTUGUBREEN	300	2017	1950	2000	0.307	940	-850	90
NO	HELLSTUGUBREEN	300	2017	1900	1950	0.603	680	-1030	-350
NO	HELLSTUGUBREEN	300	2017	1850	1900	0.373	590	-1200	-610
NO	HELLSTUGUBREEN	300	2017	1800	1850	0.332	750	-1400	-650
NO	HELLSTUGUBREEN	300	2017	1750	1800	0.157	690	-1600	-910
NO	HELLSTUGUBREEN	300	2017	1700	1750	0.088	520	-1850	-1330
NO	HELLSTUGUBREEN	300	2017	1650	1700	0.139	570	-2200	-1630
NO	HELLSTUGUBREEN	300	2017	1600	1650	0.114	460	-2650	-2190
NO	HELLSTUGUBREEN	300	2017	1550	1600	0.124	180	-3100	-2920
NO	HELLSTUGUBREEN	300	2017	1500	1550	0.083	-240	-3500	-3740
NO	HELLSTUGUBREEN	300	2017	1482	1500	0.011	-450	-3800	-4250
NO	LANGFJORDJOEKELEN	323	2016	1000	1050	0.417	1800	-2675	-875
NO	LANGFJORDJOEKELEN	323	2016	950	1000	0.467	1900	-2800	-900
NO	LANGFJORDJOEKELEN	323	2016	900	950	0.376	1975	-2925	-950
NO	LANGFJORDJOEKELEN	323	2016	850	900	0.362	2000	-3075	-1075
NO	LANGFJORDJOEKELEN	323	2016	800	850	0.232	2000	-3225	-1225
NO	LANGFJORDJOEKELEN	323	2016	750	800	0.217	1850	-3375	-1525
NO	LANGFJORDJOEKELEN	323	2016	700	750	0.267	1650	-3550	-1900
NO	LANGFJORDJOEKELEN	323	2016	650	700	0.203	1450	-3725	-2275
NO	LANGFJORDJOEKELEN	323	2016	600	650	0.168	1275	-3900	-2625
NO	LANGFJORDJOEKELEN	323	2016	550	600	0.128	1100	-4075	-2975
NO	LANGFJORDJOEKELEN	323	2016	500	550	0.121	950	-4250	-3300
NO	LANGFJORDJOEKELEN	323	2016	450	500	0.095	800	-4425	-3625
NO	LANGFJORDJOEKELEN	323	2016	400	450	0.096	650	-4600	-3950
NO	LANGFJORDJOEKELEN	323	2016	350	400	0.049	500	-4775	-4275
NO	LANGFJORDJOEKELEN	323	2016	302	350	0.018	350	-4950	-4600
NO	LANGFJORDJOEKELEN	323	2017	1000	1050	0.417	2350	-1475	875
NO	LANGFJORDJOEKELEN	323	2017	950	1000	0.467	2375	-1600	775
NO	LANGFJORDJOEKELEN	323	2017	900	950	0.376	2300	-1725	575
NO	LANGFJORDJOEKELEN	323	2017	850	900	0.362	2200	-1900	300
NO	LANGFJORDJOEKELEN	323	2017	800	850	0.232	2175	-2100	75
NO	LANGFJORDJOEKELEN	323	2017	750	800	0.217	2175	-2350	-175
NO	LANGFJORDJOEKELEN	323	2017	700	750	0.267	2000	-2600	-600
NO	LANGFJORDJOEKELEN	323	2017	650	700	0.203	1850	-2875	-1025
NO	LANGFJORDJOEKELEN	323	2017	600	650	0.168	1775	-3150	-1375
NO	LANGFJORDJOEKELEN	323	2017	550	600	0.128	1675	-3450	-1775
NO	LANGFJORDJOEKELEN	323	2017	500	550	0.121	1575	-3775	-2200
NO	LANGFJORDJOEKELEN	323	2017	450	500	0.095	1475	-4125	-2650
NO	LANGFJORDJOEKELEN	323	2017	400	450	0.096	1400	-4500	-3100
NO	LANGFJORDJOEKELEN	323	2017	350	400	0.049	1325	-4900	-3575
NO	LANGFJORDJOEKELEN	323	2017	302	350	0.018	1250	-5300	-4050
NO	MOESEVASSBREEN	10473	2017	1600	1617	0.531	3400	-2050	1350
NO	MOESEVASSBREEN	10473	2017	1550	1600	1.568	3525	-2125	1400

PU	GLACIER_NAME	WGMS_ID	YEAR	ELEV_FROM	ELEV_TO	AREA	BW	BS	BA
NO	MOESEVASSBREEN	10473	2017	1500	1550	1.406	3700	-2250	1450
NO	MOESEVASSBREEN	10473	2017	1450	1500	1.607	3650	-2425	1225
NO	MOESEVASSBREEN	10473	2017	1400	1450	1.831	3475	-2625	850
NO	MOESEVASSBREEN	10473	2017	1350	1400	2.245	3225	-2850	375
NO	MOESEVASSBREEN	10473	2017	1300	1350	2.057	2975	-3100	-125
NO	MOESEVASSBREEN	10473	2017	1250	1300	1.567	2775	-3425	-650
NO	MOESEVASSBREEN	10473	2017	1200	1250	0.798	2600	-3800	-1200
NO	MOESEVASSBREEN	10473	2017	1150	1200	0.625	2450	-4250	-1800
NO	MOESEVASSBREEN	10473	2017	1100	1150	0.535	2275	-4700	-2425
NO	MOESEVASSBREEN	10473	2017	1050	1100	0.323	2050	-5075	-3025
NO	MOESEVASSBREEN	10473	2017	1000	1050	0.283	1725	-5400	-3675
NO	MOESEVASSBREEN	10473	2017	950	1000	0.063	1200	-5675	-4475
NO	MOESEVASSBREEN	10473	2017	873	950	0.049	500	-6000	-5500
NO	NIGARDSBREEN	290	2016	1900	1952	0.277	3175	-1650	1525
NO	NIGARDSBREEN	290	2016	1800	1900	4.579	3175	-1725	1450
NO	NIGARDSBREEN	290	2016	1700	1800	9.051	3025	-1825	1200
NO	NIGARDSBREEN	290	2016	1600	1700	12.722	2850	-2000	850
NO	NIGARDSBREEN	290	2016	1500	1600	8.724	2875	-2225	650
NO	NIGARDSBREEN	290	2016	1400	1500	5.612	2850	-2525	325
NO	NIGARDSBREEN	290	2016	1300	1400	2.015	2725	-2900	-175
NO	NIGARDSBREEN	290	2016	1200	1300	0.751	2475	-3300	-825
NO	NIGARDSBREEN	290	2016	1100	1200	0.354	2150	-3750	-1600
NO	NIGARDSBREEN	290	2016	1000	1100	0.495	1850	-4250	-2400
NO	NIGARDSBREEN	290	2016	900	1000	0.424	1525	-4800	-3275
NO	NIGARDSBREEN	290	2016	800	900	0.482	1200	-5425	-4225
NO	NIGARDSBREEN	290	2016	700	800	0.294	950	-6150	-5200
NO	NIGARDSBREEN	290	2016	600	700	0.385	700	-6950	-6250
NO	NIGARDSBREEN	290	2016	500	600	0.268	500	-7775	-7275
NO	NIGARDSBREEN	290	2016	400	500	0.123	300	-8625	-8325
NO	NIGARDSBREEN	290	2016	330	400	0.055	150	-9400	-9250
NO	NIGARDSBREEN	290	2017	1900	1952	0.277	2525	-575	1950
NO	NIGARDSBREEN	290	2017	1800	1900	4.579	2750	-750	2000
NO	NIGARDSBREEN	290	2017	1700	1800	9.051	2500	-1000	1500
NO	NIGARDSBREEN	290	2017	1600	1700	12.722	2425	-1275	1150
NO	NIGARDSBREEN	290	2017	1500	1600	8.724	2200	-1575	625
NO	NIGARDSBREEN	290	2017	1400	1500	5.612	2025	-1950	75
NO	NIGARDSBREEN	290	2017	1300	1400	2.015	1775	-2425	-650
NO	NIGARDSBREEN	290	2017	1200	1300	0.751	1450	-2900	-1450
NO	NIGARDSBREEN	290	2017	1100	1200	0.354	1050	-3350	-2300
NO	NIGARDSBREEN	290	2017	1000	1100	0.495	600	-3800	-3200
NO	NIGARDSBREEN	290	2017	900	1000	0.424	125	-4225	-4100
NO	NIGARDSBREEN	290	2017	800	900	0.482	-325	-4575	-4900
NO	NIGARDSBREEN	290	2017	700	800	0.294	-800	-4900	-5700
NO	NIGARDSBREEN	290	2017	600	700	0.385	-1250	-5200	-6450
NO	NIGARDSBREEN	290	2017	500	600	0.268	-1700	-5475	-7175
NO	NIGARDSBREEN	290	2017	400	500	0.123	-2125	-5750	-7875
NO	NIGARDSBREEN	290	2017	330	400	0.055	-2500	-5975	-8475
NO	REMBESDALSKAAKA	2296	2016	1850	1854	0.029	2250	-1800	450
NO	REMBESDALSKAAKA	2296	2016	1800	1850	3.213	2350	-1900	450
NO	REMBESDALSKAAKA	2296	2016	1750	1800	3.992	2500	-2100	400
NO	REMBESDALSKAAKA	2296	2016	1700	1750	4.048	2450	-2300	150
NO	REMBESDALSKAAKA	2296	2016	1650	1700	2.281	2400	-2500	-100
NO	REMBESDALSKAAKA	2296	2016	1600	1650	0.957	2100	-2800	-700
NO	REMBESDALSKAAKA	2296	2016	1550	1600	0.545	1800	-3100	-1300
NO	REMBESDALSKAAKA	2296	2016	1500	1550	0.535	1700	-3500	-1800
NO	REMBESDALSKAAKA	2296	2016	1450	1500	0.336	1540	-4000	-2460
NO	REMBESDALSKAAKA	2296	2016	1400	1450	0.197	1380	-4500	-3120
NO	REMBESDALSKAAKA	2296	2016	1350	1400	0.108	1220	-5000	-3780
NO	REMBESDALSKAAKA	2296	2016	1300	1350	0.074	1100	-5500	-4400
NO	REMBESDALSKAAKA	2296	2016	1250	1300	0.199	1000	-6000	-5000
NO	REMBESDALSKAAKA	2296	2016	1200	1250	0.262	900	-6500	-5600
NO	REMBESDALSKAAKA	2296	2016	1150	1200	0.333	800	-7000	-6200
NO	REMBESDALSKAAKA	2296	2016	1100	1150	0.143	700	-7500	-6800
NO	REMBESDALSKAAKA	2296	2016	1066	1100	0.012	600	-8000	-7400
NO	REMBESDALSKAAKA	2296	2017	1850	1854	0.029	2250	-1250	1000
NO	REMBESDALSKAAKA	2296	2017	1800	1850	3.213	2460	-1200	1260
NO	REMBESDALSKAAKA	2296	2017	1750	1800	3.992	2690	-1200	1490
NO	REMBESDALSKAAKA	2296	2017	1700	1750	4.048	2620	-1400	1220
NO	REMBESDALSKAAKA	2296	2017	1650	1700	2.281	2440	-1600	840
NO	REMBESDALSKAAKA	2296	2017	1600	1650	0.957	1940	-1800	140
NO	REMBESDALSKAAKA	2296	2017	1550	1600	0.545	1600	-2000	-400
NO	REMBESDALSKAAKA	2296	2017	1500	1550	0.535	1300	-2200	-900
NO	REMBESDALSKAAKA	2296	2017	1450	1500	0.336	800	-2500	-1700
NO	REMBESDALSKAAKA	2296	2017	1400	1450	0.197	500	-2800	-2300
NO	REMBESDALSKAAKA	2296	2017	1350	1400	0.108	300	-3100	-2800
NO	REMBESDALSKAAKA	2296	2017	1300	1350	0.074	300	-3400	-3100
NO	REMBESDALSKAAKA	2296	2017	1250	1300	0.199	300	-3750	-3450
NO	REMBESDALSKAAKA	2296	2017	1200	1250	0.262	320	-4050	-3730
NO	REMBESDALSKAAKA	2296	2017	1150	1200	0.333	200	-4350	-4150
NO	REMBESDALSKAAKA	2296	2017	1100	1150	0.143	150	-4650	-4500
NO	REMBESDALSKAAKA	2296	2017	1066	1100	0.012	50	-4900	-4850
NO	RUNDVASSBREEN	2670	2016	1450	1525	0.167	2150	-1425	725
NO	RUNDVASSBREEN	2670	2016	1400	1450	0.188	2050	-1450	600
NO	RUNDVASSBREEN	2670	2016	1350	1400	1.922	1925	-1475	450
NO	RUNDVASSBREEN	2670	2016	1300	1350	1.793	1800	-1525	275
NO	RUNDVASSBREEN	2670	2016	1250	1300	1.943	1675	-1625	50
NO	RUNDVASSBREEN	2670	2016	1200	1250	0.782	1525	-1825	-300
NO	RUNDVASSBREEN	2670	2016	1150	1200	0.837	1350	-2175	-825
NO	RUNDVASSBREEN	2670	2016	1100	1150	1.752	1150	-2600	-1450
NO	RUNDVASSBREEN	2670	2016	1050	1100	1.326	950	-3050	-2100
NO	RUNDVASSBREEN	2670	2016	1000	1050	0.105	700	-3500	-2800
NO	RUNDVASSBREEN	2670	2016	950	1000	0.057	425	-3950	-3525
NO	RUNDVASSBREEN	2670	2016	900	950	0.04	200	-4400	-4200
NO	RUNDVASSBREEN	2670	2016	836	900	0.024	25	-4900	-4875
NO	RUNDVASSBREEN	2670	2017	1450	1527	0.168	2375	-825	1550
NO	RUNDVASSBREEN	2670	2017	1400	1450	0.185	2550	-900	1650

PU	GLACIER_NAME	WGMS_ID	YEAR	ELEV_FROM	ELEV_TO	AREA	BW	BS	BA
NO	RUNDVASSBREEN	2670	2017	1350	1400	1.923	2375	-1000	1375
NO	RUNDVASSBREEN	2670	2017	1300	1350	1.758	2150	-1150	1000
NO	RUNDVASSBREEN	2670	2017	1250	1300	1.939	2050	-1375	675
NO	RUNDVASSBREEN	2670	2017	1200	1250	0.79	2100	-1625	475
NO	RUNDVASSBREEN	2670	2017	1150	1200	0.759	2050	-1875	175
NO	RUNDVASSBREEN	2670	2017	1100	1150	1.613	1775	-2100	-325
NO	RUNDVASSBREEN	2670	2017	1050	1100	1.506	1525	-2325	-800
NO	RUNDVASSBREEN	2670	2017	1000	1050	0.102	1325	-2525	-1200
NO	RUNDVASSBREEN	2670	2017	950	1000	0.054	1125	-2725	-1600
NO	RUNDVASSBREEN	2670	2017	900	950	0.038	925	-2925	-2000
NO	RUNDVASSBREEN	2670	2017	853	900	0.011	675	-3150	-2475
NO	STORBREEN	302	2016	2050	2102	0.004	2100	-500	1600
NO	STORBREEN	302	2016	2000	2050	0.095	2050	-600	1450
NO	STORBREEN	302	2016	1950	2000	0.179	2000	-800	1200
NO	STORBREEN	302	2016	1900	1950	0.29	1895	-1000	895
NO	STORBREEN	302	2016	1850	1900	0.345	1576	-1200	376
NO	STORBREEN	302	2016	1800	1850	0.753	1277	-1500	-223
NO	STORBREEN	302	2016	1750	1800	0.866	1041	-1700	-659
NO	STORBREEN	302	2016	1700	1750	0.681	1002	-2000	-998
NO	STORBREEN	302	2016	1650	1700	0.548	971	-2200	-1229
NO	STORBREEN	302	2016	1600	1650	0.312	882	-2400	-1518
NO	STORBREEN	302	2016	1550	1600	0.495	762	-2600	-1838
NO	STORBREEN	302	2016	1500	1550	0.263	667	-2850	-2183
NO	STORBREEN	302	2016	1450	1500	0.176	380	-3000	-2620
NO	STORBREEN	302	2016	1400	1450	0.135	420	-3200	-2780
NO	STORBREEN	302	2017	2050	2102	0.004	2000	-1000	1000
NO	STORBREEN	302	2017	2000	2050	0.095	1950	-1030	920
NO	STORBREEN	302	2017	1950	2000	0.179	1900	-1100	800
NO	STORBREEN	302	2017	1900	1950	0.29	1800	-1150	650
NO	STORBREEN	302	2017	1850	1900	0.345	1700	-1180	520
NO	STORBREEN	302	2017	1800	1850	0.753	1500	-1300	200
NO	STORBREEN	302	2017	1750	1800	0.866	1200	-1400	-200
NO	STORBREEN	302	2017	1700	1750	0.681	1002	-1600	-598
NO	STORBREEN	302	2017	1650	1700	0.548	971	-1870	-899
NO	STORBREEN	302	2017	1600	1650	0.312	882	-2080	-1198
NO	STORBREEN	302	2017	1550	1600	0.495	762	-2160	-1398
NO	STORBREEN	302	2017	1500	1550	0.263	667	-2470	-1803
NO	STORBREEN	302	2017	1450	1500	0.176	500	-2900	-2400
NO	STORBREEN	302	2017	1400	1450	0.135	720	-3520	-2800
NO	SVELGJABREEN	3343	2016	1600	1632	1.157	4150	-2350	1800
NO	SVELGJABREEN	3343	2016	1550	1600	1.847	4100	-2475	1625
NO	SVELGJABREEN	3343	2016	1500	1550	2.868	4000	-2625	1375
NO	SVELGJABREEN	3343	2016	1450	1500	2.084	3950	-2775	1175
NO	SVELGJABREEN	3343	2016	1400	1450	1.821	3875	-2925	950
NO	SVELGJABREEN	3343	2016	1350	1400	2.702	3675	-3100	575
NO	SVELGJABREEN	3343	2016	1300	1350	1.986	3350	-3350	0
NO	SVELGJABREEN	3343	2016	1250	1300	1.554	3000	-3625	-625
NO	SVELGJABREEN	3343	2016	1200	1250	1.527	2700	-3900	-1200
NO	SVELGJABREEN	3343	2016	1150	1200	1.478	2400	-4175	-1775
NO	SVELGJABREEN	3343	2016	1100	1150	0.933	2150	-4425	-2275
NO	SVELGJABREEN	3343	2016	1050	1100	1.197	1950	-4675	-2725
NO	SVELGJABREEN	3343	2016	1000	1050	0.639	1775	-4900	-3125
NO	SVELGJABREEN	3343	2016	950	1000	0.34	1550	-5100	-3550
NO	SVELGJABREEN	3343	2016	900	950	0.142	1300	-5300	-4000
NO	SVELGJABREEN	3343	2016	829	900	0.071	950	-5525	-4575
NO	SVELGJABREEN	3343	2017	1600	1634	1.242	3298	-2046	1252
NO	SVELGJABREEN	3343	2017	1550	1600	1.87	3348	-2121	1227
NO	SVELGJABREEN	3343	2017	1500	1550	2.872	3398	-2246	1152
NO	SVELGJABREEN	3343	2017	1450	1500	2.111	3423	-2396	1027
NO	SVELGJABREEN	3343	2017	1400	1450	1.751	3298	-2571	727
NO	SVELGJABREEN	3343	2017	1350	1400	2.726	3023	-2746	277
NO	SVELGJABREEN	3343	2017	1300	1350	1.94	2773	-2971	-198
NO	SVELGJABREEN	3343	2017	1250	1300	1.524	2498	-3221	-723
NO	SVELGJABREEN	3343	2017	1200	1250	1.521	2248	-3496	-1248
NO	SVELGJABREEN	3343	2017	1150	1200	1.472	2023	-3771	-1748
NO	SVELGJABREEN	3343	2017	1100	1150	0.924	1848	-4046	-2198
NO	SVELGJABREEN	3343	2017	1050	1100	1.179	1698	-4271	-2573
NO	SVELGJABREEN	3343	2017	1000	1050	0.647	1548	-4496	-2948
NO	SVELGJABREEN	3343	2017	950	1000	0.342	1373	-4696	-3323
NO	SVELGJABREEN	3343	2017	900	950	0.144	1198	-4896	-3698
NO	SVELGJABREEN	3343	2017	829	900	0.072	973	-5096	-4123
NP - Nepal									
NP	RIKHA SAMBA	1516	2016	6500	6515	0.0062			86
NP	RIKHA SAMBA	1516	2016	6450	6500	0.0116			86
NP	RIKHA SAMBA	1516	2016	6400	6450	0.034			86
NP	RIKHA SAMBA	1516	2016	6350	6400	0.044			86
NP	RIKHA SAMBA	1516	2016	6300	6350	0.0656			86
NP	RIKHA SAMBA	1516	2016	6250	6300	0.0849			86
NP	RIKHA SAMBA	1516	2016	6200	6250	0.0841			86
NP	RIKHA SAMBA	1516	2016	6150	6200	0.0802			86
NP	RIKHA SAMBA	1516	2016	6100	6150	0.108			86
NP	RIKHA SAMBA	1516	2016	6050	6100	0.1983			86
NP	RIKHA SAMBA	1516	2016	6000	6050	0.2739			86
NP	RIKHA SAMBA	1516	2016	5950	6000	0.4815			86
NP	RIKHA SAMBA	1516	2016	5900	5950	0.4715			61
NP	RIKHA SAMBA	1516	2016	5850	5900	0.4167			3
NP	RIKHA SAMBA	1516	2016	5800	5850	0.5347			-49
NP	RIKHA SAMBA	1516	2016	5750	5800	0.8395			-108
NP	RIKHA SAMBA	1516	2016	5700	5750	0.4352			-203
NP	RIKHA SAMBA	1516	2016	5650	5700	0.3758			-723
NP	RIKHA SAMBA	1516	2016	5600	5650	0.331			-1282
NP	RIKHA SAMBA	1516	2016	5550	5600	0.1705			-1837
NP	RIKHA SAMBA	1516	2016	5500	5550	0.1019			-2428
NP	RIKHA SAMBA	1516	2016	5450	5500	0.1343			-2991
NP	RIKHA SAMBA	1516	2016	5416	5450	0.0417			-3438

PU	GLACIER_NAME	WGMS_ID	YEAR	ELEV_FROM	ELEV_TO	AREA	BW	BS	BA
NP	RIKHA SAMBA	1516	2017	6500	6515	0.0062			291
NP	RIKHA SAMBA	1516	2017	6450	6500	0.0116			291
NP	RIKHA SAMBA	1516	2017	6400	6450	0.034			291
NP	RIKHA SAMBA	1516	2017	6350	6400	0.044			291
NP	RIKHA SAMBA	1516	2017	6300	6350	0.0656			291
NP	RIKHA SAMBA	1516	2017	6250	6300	0.0849			291
NP	RIKHA SAMBA	1516	2017	6200	6250	0.0841			291
NP	RIKHA SAMBA	1516	2017	6150	6200	0.0802			291
NP	RIKHA SAMBA	1516	2017	6100	6150	0.108			291
NP	RIKHA SAMBA	1516	2017	6050	6100	0.1983			291
NP	RIKHA SAMBA	1516	2017	6000	6050	0.2739			291
NP	RIKHA SAMBA	1516	2017	5950	6000	0.4815			291
NP	RIKHA SAMBA	1516	2017	5900	5950	0.4715			218
NP	RIKHA SAMBA	1516	2017	5850	5900	0.4167			41
NP	RIKHA SAMBA	1516	2017	5800	5850	0.5347			-114
NP	RIKHA SAMBA	1516	2017	5750	5800	0.8395			-290
NP	RIKHA SAMBA	1516	2017	5700	5750	0.4352			-437
NP	RIKHA SAMBA	1516	2017	5650	5700	0.3758			-615
NP	RIKHA SAMBA	1516	2017	5600	5650	0.331			-785
NP	RIKHA SAMBA	1516	2017	5550	5600	0.1705			-1422
NP	RIKHA SAMBA	1516	2017	5500	5550	0.1019			-2407
NP	RIKHA SAMBA	1516	2017	5450	5500	0.1343			-3343
NP	RIKHA SAMBA	1516	2017	5416	5450	0.0417			-4087
NP	YALA	912	2016	5650	5661	0.0027			1991
NP	YALA	912	2016	5600	5650	0.0387			1653
NP	YALA	912	2016	5550	5600	0.0783			1204
NP	YALA	912	2016	5500	5550	0.1224			741
NP	YALA	912	2016	5450	5500	0.2304			271
NP	YALA	912	2016	5400	5450	0.2214			-166
NP	YALA	912	2016	5350	5400	0.2187			-646
NP	YALA	912	2016	5300	5350	0.2592			-1099
NP	YALA	912	2016	5250	5300	0.2232			-1576
NP	YALA	912	2016	5200	5250	0.1872			-2031
NP	YALA	912	2016	5168	5200	0.0486			-2391
NP	YALA	912	2017	5650	5661	0.0027			1892
NP	YALA	912	2017	5600	5650	0.0387			1493
NP	YALA	912	2017	5550	5600	0.0783			962
NP	YALA	912	2017	5500	5550	0.1224			414
NP	YALA	912	2017	5450	5500	0.2304			-142
NP	YALA	912	2017	5400	5450	0.2214			-659
NP	YALA	912	2017	5350	5400	0.2187			-1226
NP	YALA	912	2017	5300	5350	0.2592			-1762
NP	YALA	912	2017	5250	5300	0.2232			-2327
NP	YALA	912	2017	5200	5250	0.1872			-2865
NP	YALA	912	2017	5168	5200	0.0486			-3291
PE - Peru									
PE	ARTESONRAJU	3292	2016	5350	5400	0.6738			513
PE	ARTESONRAJU	3292	2016	5300	5350	0.4882			776
PE	ARTESONRAJU	3292	2016	5250	5300	0.2525			1236
PE	ARTESONRAJU	3292	2016	5200	5250	0.2715			1143
PE	ARTESONRAJU	3292	2016	5150	5200	0.2293			1038
PE	ARTESONRAJU	3292	2016	5100	5150	0.2492			822
PE	ARTESONRAJU	3292	2016	5050	5100	0.1882			339
PE	ARTESONRAJU	3292	2016	5000	5050	0.2975			-560
PE	ARTESONRAJU	3292	2016	4900	5000	0.193			-3170
PE	ARTESONRAJU	3292	2016	4840	4900	0.1627			-5913
PE	ARTESONRAJU	3292	2016	4820	4840	0.1059			-8138
PE	ARTESONRAJU	3292	2016	4800	4820	0.1201			-9044
PE	ARTESONRAJU	3292	2016	4780	4800	0.0954			-10221
PE	ARTESONRAJU	3292	2016	4760	4780	0.0805			-10677
PE	ARTESONRAJU	3292	2016	4740	4760	0.0657			-11186
PE	ARTESONRAJU	3292	2016	4720	4740	0.0599			-11364
PE	ARTESONRAJU	3292	2016	4700	4720	0.0569			-11482
PE	ARTESONRAJU	3292	2017	5350	5400	0.674			500
PE	ARTESONRAJU	3292	2017	5250	5350	0.488			500
PE	ARTESONRAJU	3292	2017	5200	5250	0.252			1089
PE	ARTESONRAJU	3292	2017	5150	5200	0.271			1335
PE	ARTESONRAJU	3292	2017	5100	5150	0.229			1250
PE	ARTESONRAJU	3292	2017	5050	5100	0.249			1236
PE	ARTESONRAJU	3292	2017	5000	5050	0.188			816
PE	ARTESONRAJU	3292	2017	4950	5000	0.297			220
PE	ARTESONRAJU	3292	2017	4900	4950	0.13			-1164
PE	ARTESONRAJU	3292	2017	4860	4900	0.136			-2221
PE	ARTESONRAJU	3292	2017	4840	4860	0.078			-3226
PE	ARTESONRAJU	3292	2017	4820	4840	0.104			-4233
PE	ARTESONRAJU	3292	2017	4800	4820	0.116			-5380
PE	ARTESONRAJU	3292	2017	4780	4800	0.091			-6485
PE	ARTESONRAJU	3292	2017	4760	4780	0.083			-7662
PE	ARTESONRAJU	3292	2017	4740	4760	0.068			-8388
PE	ARTESONRAJU	3292	2017	4720	4740	0.06			-8790
PE	ARTESONRAJU	3292	2017	4700	4720	0.064			-8929
PE	YANAMAREY	226	2016	5070	5100	0.0006			500
PE	YANAMAREY	226	2016	5040	5070	0.0084			528
PE	YANAMAREY	226	2016	5010	5040	0.0231			641
PE	YANAMAREY	226	2016	4980	5010	0.0271			1094
PE	YANAMAREY	226	2016	4950	4980	0.029			1022
PE	YANAMAREY	226	2016	4920	4950	0.0295			-286
PE	YANAMAREY	226	2016	4890	4920	0.025			-2294
PE	YANAMAREY	226	2016	4860	4890	0.0258			-3815
PE	YANAMAREY	226	2016	4830	4860	0.0224			-5104
PE	YANAMAREY	226	2016	4800	4830	0.0189			-5683
PE	YANAMAREY	226	2016	4780	4800	0.0111			-5786
PE	YANAMAREY	226	2016	4760	4780	0.0134			-6528
PE	YANAMAREY	226	2016	4740	4760	0.0085			-7284
PE	YANAMAREY	226	2016	4720	4740	0.0068			-7379

PU	GLACIER_NAME	WGMS_ID	YEAR	ELEV_FROM	ELEV_TO	AREA	BW	BS	BA
PE	YANAMAREY	226	2016	4700	4720	0.0056			-7686
PE	YANAMAREY	226	2016	4680	4700	0.0049			-7750
PE	YANAMAREY	226	2017	5100	5200	0.023			644
PE	YANAMAREY	226	2017	5050	5100	0.0236			592
PE	YANAMAREY	226	2017	5000	5050	0.035			637
PE	YANAMAREY	226	2017	4950	5000	0.042			105
PE	YANAMAREY	226	2017	4900	4950	0.0361			-937
PE	YANAMAREY	226	2017	4880	4900	0.0152			-1700
PE	YANAMAREY	226	2017	4860	4880	0.0143			-2209
PE	YANAMAREY	226	2017	4840	4860	0.0113			-2493
PE	YANAMAREY	226	2017	4820	4840	0.014			-2519
PE	YANAMAREY	226	2017	4800	4820	0.0129			-2884
PE	YANAMAREY	226	2017	4780	4800	0.0104			-3857
PE	YANAMAREY	226	2017	4760	4780	0.0066			-4733
PE	YANAMAREY	226	2017	4740	4760	0.006			-5242
PE	YANAMAREY	226	2017	4720	4740	0.0037			-5709
PE	YANAMAREY	226	2017	4700	4720	0.0004			-5750
SE - Sweden									
SE	MARMAGLACIAEREN	1461	2016	1780	1800	0.0007	2340	-30	2300
SE	MARMAGLACIAEREN	1461	2016	1760	1780	0.0047	2360	-120	2240
SE	MARMAGLACIAEREN	1461	2016	1740	1760	0.0173	2600	-240	2370
SE	MARMAGLACIAEREN	1461	2016	1720	1740	0.0306	2650	-340	2300
SE	MARMAGLACIAEREN	1461	2016	1700	1720	0.0403	2560	-460	2090
SE	MARMAGLACIAEREN	1461	2016	1680	1700	0.1035	2270	-590	1680
SE	MARMAGLACIAEREN	1461	2016	1660	1680	0.2063	2270	-700	1570
SE	MARMAGLACIAEREN	1461	2016	1640	1660	0.1933	2110	-820	1290
SE	MARMAGLACIAEREN	1461	2016	1620	1640	0.3141	1780	-930	840
SE	MARMAGLACIAEREN	1461	2016	1600	1620	0.3231	1200	-1040	160
SE	MARMAGLACIAEREN	1461	2016	1580	1600	0.1899	850	-1160	-320
SE	MARMAGLACIAEREN	1461	2016	1560	1580	0.2275	790	-1290	-490
SE	MARMAGLACIAEREN	1461	2016	1540	1560	0.346	830	-1400	-570
SE	MARMAGLACIAEREN	1461	2016	1520	1540	0.3665	780	-1510	-740
SE	MARMAGLACIAEREN	1461	2016	1500	1520	0.1861	750	-1630	-880
SE	MARMAGLACIAEREN	1461	2016	1480	1500	0.1955	700	-1760	-1060
SE	MARMAGLACIAEREN	1461	2016	1460	1480	0.2529	710	-1870	-1170
SE	MARMAGLACIAEREN	1461	2016	1440	1460	0.2169	780	-1980	-1200
SE	MARMAGLACIAEREN	1461	2016	1420	1440	0.1593	850	-2110	-1250
SE	MARMAGLACIAEREN	1461	2016	1400	1420	0.1496	850	-2230	-1380
SE	MARMAGLACIAEREN	1461	2016	1380	1400	0.1469	800	-2340	-1550
SE	MARMAGLACIAEREN	1461	2016	1360	1380	0.1433	750	-2460	-1710
SE	MARMAGLACIAEREN	1461	2016	1340	1360	0.0976	750	-2570	-1820
SE	MARMAGLACIAEREN	1461	2016	1320	1340	0.0511	750	-2660	-1910
SE	MARMAGLACIAEREN	1461	2017	1740	1760	0.0005	1550	220	1770
SE	MARMAGLACIAEREN	1461	2017	1720	1740	0.0116	1610	170	1770
SE	MARMAGLACIAEREN	1461	2017	1700	1720	0.0247	1590	90	1680
SE	MARMAGLACIAEREN	1461	2017	1680	1700	0.0392	1660	10	1670
SE	MARMAGLACIAEREN	1461	2017	1660	1680	0.1013	1770	-80	1690
SE	MARMAGLACIAEREN	1461	2017	1640	1660	0.1818	1730	-160	1570
SE	MARMAGLACIAEREN	1461	2017	1620	1640	0.1799	1440	-240	1190
SE	MARMAGLACIAEREN	1461	2017	1600	1620	0.2849	940	-330	620
SE	MARMAGLACIAEREN	1461	2017	1580	1600	0.2305	670	-400	260
SE	MARMAGLACIAEREN	1461	2017	1560	1580	0.1757	770	-490	280
SE	MARMAGLACIAEREN	1461	2017	1540	1560	0.203	830	-580	260
SE	MARMAGLACIAEREN	1461	2017	1520	1540	0.2848	830	-660	160
SE	MARMAGLACIAEREN	1461	2017	1500	1520	0.3134	770	-740	30
SE	MARMAGLACIAEREN	1461	2017	1480	1500	0.1773	850	-820	20
SE	MARMAGLACIAEREN	1461	2017	1460	1480	0.1653	890	-910	-20
SE	MARMAGLACIAEREN	1461	2017	1440	1460	0.2132	810	-990	-180
SE	MARMAGLACIAEREN	1461	2017	1420	1440	0.1968	760	-1070	-320
SE	MARMAGLACIAEREN	1461	2017	1400	1420	0.1415	790	-1160	-360
SE	MARMAGLACIAEREN	1461	2017	1380	1400	0.1142	860	-1240	-380
SE	MARMAGLACIAEREN	1461	2017	1360	1380	0.1099	900	-1320	-430
SE	MARMAGLACIAEREN	1461	2017	1340	1360	0.1058	890	-1410	-520
SE	MARMAGLACIAEREN	1461	2017	1320	1340	0.0517	850	-1480	-630
SE	RABOTS GLACIAER	334	2016	1660	1680	0.0011	1090	480	1570
SE	RABOTS GLACIAER	334	2016	1640	1660	0.0103	1080	390	1470
SE	RABOTS GLACIAER	334	2016	1620	1640	0.0216	1080	270	1340
SE	RABOTS GLACIAER	334	2016	1600	1620	0.0305	1070	150	1210
SE	RABOTS GLACIAER	334	2016	1580	1600	0.039	1060	20	1070
SE	RABOTS GLACIAER	334	2016	1560	1580	0.0602	1050	-110	940
SE	RABOTS GLACIAER	334	2016	1540	1560	0.0738	1020	-240	780
SE	RABOTS GLACIAER	334	2016	1520	1540	0.1202	970	-370	600
SE	RABOTS GLACIAER	334	2016	1500	1520	0.184	940	-490	450
SE	RABOTS GLACIAER	334	2016	1480	1500	0.1814	910	-610	300
SE	RABOTS GLACIAER	334	2016	1460	1480	0.1404	890	-740	150
SE	RABOTS GLACIAER	334	2016	1440	1460	0.1156	880	-870	10
SE	RABOTS GLACIAER	334	2016	1420	1440	0.0953	880	-990	-120
SE	RABOTS GLACIAER	334	2016	1400	1420	0.0832	870	-1120	-250
SE	RABOTS GLACIAER	334	2016	1380	1400	0.0996	880	-1250	-380
SE	RABOTS GLACIAER	334	2016	1360	1380	0.2203	870	-1380	-510
SE	RABOTS GLACIAER	334	2016	1340	1360	0.2502	820	-1500	-680
SE	RABOTS GLACIAER	334	2016	1320	1340	0.204	780	-1620	-840
SE	RABOTS GLACIAER	334	2016	1300	1320	0.1182	740	-1750	-1020
SE	RABOTS GLACIAER	334	2016	1280	1300	0.1156	710	-1890	-1180
SE	RABOTS GLACIAER	334	2016	1260	1280	0.198	670	-2010	-1340
SE	RABOTS GLACIAER	334	2016	1240	1260	0.1893	620	-2130	-1520
SE	RABOTS GLACIAER	334	2016	1220	1240	0.1567	570	-2260	-1700
SE	RABOTS GLACIAER	334	2016	1200	1220	0.1351	520	-2390	-1860
SE	RABOTS GLACIAER	334	2016	1180	1200	0.0967	480	-2510	-2030
SE	RABOTS GLACIAER	334	2016	1160	1180	0.0662	460	-2640	-2190
SE	RABOTS GLACIAER	334	2016	1140	1160	0.0527	430	-2770	-2340
SE	RABOTS GLACIAER	334	2016	1120	1140	0.0418	400	-2890	-2490
SE	RABOTS GLACIAER	334	2016	1100	1120	0.0258	370	-3020	-2640
SE	RABOTS GLACIAER	334	2016	1080	1100	0.005	350	-3110	-2750
SE	RABOTS GLACIAER	334	2017	1660	1680	0.0011	1450	-350	1100

PU	GLACIER_NAME	WGMS_ID	YEAR	ELEV_FROM	ELEV_TO	AREA	BW	BS	BA
SE	RABOTS GLACIAER	334	2017	1640	1660	0.0103	1450	-400	1050
SE	RABOTS GLACIAER	334	2017	1620	1640	0.0216	1430	-460	970
SE	RABOTS GLACIAER	334	2017	1600	1620	0.0305	1410	-520	900
SE	RABOTS GLACIAER	334	2017	1580	1600	0.039	1400	-580	820
SE	RABOTS GLACIAER	334	2017	1560	1580	0.0602	1400	-650	750
SE	RABOTS GLACIAER	334	2017	1540	1560	0.0738	1380	-710	660
SE	RABOTS GLACIAER	334	2017	1520	1540	0.1202	1350	-780	570
SE	RABOTS GLACIAER	334	2017	1500	1520	0.184	1330	-840	490
SE	RABOTS GLACIAER	334	2017	1480	1500	0.1814	1300	-900	400
SE	RABOTS GLACIAER	334	2017	1460	1480	0.1404	1270	-960	300
SE	RABOTS GLACIAER	334	2017	1440	1460	0.1156	1240	-1030	210
SE	RABOTS GLACIAER	334	2017	1420	1440	0.0953	1230	-1090	140
SE	RABOTS GLACIAER	334	2017	1400	1420	0.0832	1220	-1160	60
SE	RABOTS GLACIAER	334	2017	1380	1400	0.0996	1220	-1220	0
SE	RABOTS GLACIAER	334	2017	1360	1380	0.2203	1220	-1290	-70
SE	RABOTS GLACIAER	334	2017	1340	1360	0.2502	1170	-1350	-180
SE	RABOTS GLACIAER	334	2017	1320	1340	0.204	1120	-1410	-280
SE	RABOTS GLACIAER	334	2017	1300	1320	0.1182	1080	-1470	-390
SE	RABOTS GLACIAER	334	2017	1280	1300	0.1156	1050	-1540	-490
SE	RABOTS GLACIAER	334	2017	1260	1280	0.198	1010	-1610	-590
SE	RABOTS GLACIAER	334	2017	1240	1260	0.1893	970	-1670	-700
SE	RABOTS GLACIAER	334	2017	1220	1240	0.1567	920	-1730	-810
SE	RABOTS GLACIAER	334	2017	1200	1220	0.1351	880	-1790	-910
SE	RABOTS GLACIAER	334	2017	1180	1200	0.0967	850	-1860	-1010
SE	RABOTS GLACIAER	334	2017	1160	1180	0.0662	820	-1920	-1100
SE	RABOTS GLACIAER	334	2017	1140	1160	0.0527	790	-1990	-1190
SE	RABOTS GLACIAER	334	2017	1120	1140	0.0418	770	-2050	-1280
SE	RABOTS GLACIAER	334	2017	1100	1120	0.0258	750	-2110	-1360
SE	RABOTS GLACIAER	334	2017	1080	1100	0.005	740	-2160	-1420
SE	RIUKOJIETNA	342	2016	1420	1440	0.2778	860	-1640	-790
SE	RIUKOJIETNA	342	2016	1400	1420	0.3116	1010	-1700	-690
SE	RIUKOJIETNA	342	2016	1380	1400	0.2785	960	-1780	-820
SE	RIUKOJIETNA	342	2016	1360	1380	0.2723	910	-1860	-950
SE	RIUKOJIETNA	342	2016	1340	1360	0.2623	880	-1940	-1070
SE	RIUKOJIETNA	342	2016	1320	1340	0.2833	870	-2030	-1160
SE	RIUKOJIETNA	342	2016	1300	1320	0.3151	860	-2110	-1250
SE	RIUKOJIETNA	342	2016	1280	1300	0.266	880	-2180	-1300
SE	RIUKOJIETNA	342	2016	1260	1280	0.1722	880	-2260	-1380
SE	RIUKOJIETNA	342	2016	1240	1260	0.0827	870	-2340	-1470
SE	RIUKOJIETNA	342	2016	1220	1240	0.054	930	-2430	-1490
SE	RIUKOJIETNA	342	2016	1200	1220	0.0345	1010	-2500	-1490
SE	RIUKOJIETNA	342	2016	1180	1200	0.0195	1100	-2590	-1480
SE	RIUKOJIETNA	342	2016	1160	1180	0.0171	1180	-2670	-1490
SE	RIUKOJIETNA	342	2016	1140	1160	0.0024	1230	-2720	-1490
SE	RIUKOJIETNA	342	2017	1420	1440	0.2778	1140	-970	170
SE	RIUKOJIETNA	342	2017	1400	1420	0.3116	1260	-1020	250
SE	RIUKOJIETNA	342	2017	1380	1400	0.2785	1330	-1070	260
SE	RIUKOJIETNA	342	2017	1360	1380	0.2723	1400	-1130	270
SE	RIUKOJIETNA	342	2017	1340	1360	0.2623	1450	-1190	260
SE	RIUKOJIETNA	342	2017	1320	1340	0.2833	1420	-1250	170
SE	RIUKOJIETNA	342	2017	1300	1320	0.3151	1380	-1310	70
SE	RIUKOJIETNA	342	2017	1280	1300	0.266	1410	-1360	50
SE	RIUKOJIETNA	342	2017	1260	1280	0.1722	1420	-1420	0
SE	RIUKOJIETNA	342	2017	1240	1260	0.0827	1400	-1470	-70
SE	RIUKOJIETNA	342	2017	1220	1240	0.054	1450	-1530	-80
SE	RIUKOJIETNA	342	2017	1200	1220	0.0345	1450	-1590	-140
SE	RIUKOJIETNA	342	2017	1180	1200	0.0195	1420	-1650	-230
SE	RIUKOJIETNA	342	2017	1160	1180	0.0171	1500	-1710	-200
SE	RIUKOJIETNA	342	2017	1140	1160	0.0024	1530	-1750	-210
SE	STORGLACIAEREN	332	2016	1840	1860	0.0005	2570	-840	1730
SE	STORGLACIAEREN	332	2016	1820	1840	0.0007	2560	-840	1720
SE	STORGLACIAEREN	332	2016	1800	1820	0.0034	2430	-830	1590
SE	STORGLACIAEREN	332	2016	1780	1800	0.0059	2420	-840	1590
SE	STORGLACIAEREN	332	2016	1760	1780	0.0073	2450	-820	1620
SE	STORGLACIAEREN	332	2016	1740	1760	0.008	2440	-830	1610
SE	STORGLACIAEREN	332	2016	1720	1740	0.0106	2430	-840	1600
SE	STORGLACIAEREN	332	2016	1700	1720	0.0311	2520	-820	1700
SE	STORGLACIAEREN	332	2016	1680	1700	0.0516	2480	-830	1650
SE	STORGLACIAEREN	332	2016	1660	1680	0.0703	2420	-840	1580
SE	STORGLACIAEREN	332	2016	1640	1660	0.0998	2380	-860	1520
SE	STORGLACIAEREN	332	2016	1620	1640	0.1465	2280	-930	1350
SE	STORGLACIAEREN	332	2016	1600	1620	0.1283	2200	-960	1240
SE	STORGLACIAEREN	332	2016	1580	1600	0.1142	2020	-900	1120
SE	STORGLACIAEREN	332	2016	1560	1580	0.1182	1870	-1010	860
SE	STORGLACIAEREN	332	2016	1540	1560	0.0938	1950	-1080	860
SE	STORGLACIAEREN	332	2016	1520	1540	0.0889	2030	-1090	940
SE	STORGLACIAEREN	332	2016	1500	1520	0.1698	2230	-1060	1170
SE	STORGLACIAEREN	332	2016	1480	1500	0.1806	1660	-1320	340
SE	STORGLACIAEREN	332	2016	1460	1480	0.0967	1280	-1610	-340
SE	STORGLACIAEREN	332	2016	1440	1460	0.0571	1280	-1780	-510
SE	STORGLACIAEREN	332	2016	1420	1440	0.0513	1530	-1910	-380
SE	STORGLACIAEREN	332	2016	1400	1420	0.096	1440	-2060	-620
SE	STORGLACIAEREN	332	2016	1380	1400	0.1678	1120	-2180	-1060
SE	STORGLACIAEREN	332	2016	1360	1380	0.2844	920	-2310	-1390
SE	STORGLACIAEREN	332	2016	1340	1360	0.2773	810	-2400	-1590
SE	STORGLACIAEREN	332	2016	1320	1340	0.1425	780	-2520	-1750
SE	STORGLACIAEREN	332	2016	1300	1320	0.086	940	-2650	-1710
SE	STORGLACIAEREN	332	2016	1280	1300	0.0729	940	-2690	-1750
SE	STORGLACIAEREN	332	2016	1260	1280	0.0741	720	-2820	-2090
SE	STORGLACIAEREN	332	2016	1240	1260	0.0599	890	-3050	-2160
SE	STORGLACIAEREN	332	2016	1220	1240	0.0461	970	-3010	-2040
SE	STORGLACIAEREN	332	2016	1200	1220	0.0329	1050	-2760	-1710
SE	STORGLACIAEREN	332	2016	1180	1200	0.0173	1140	-2560	-1420
SE	STORGLACIAEREN	332	2016	1160	1180	0.0078	700	-2450	-1750
SE	STORGLACIAEREN	332	2016	1140	1160	0.0038	670	-2420	-1750
SE	STORGLACIAEREN	332	2017	1700	1720	0.0122	2800	-900	1910

PU	GLACIER_NAME	WGMS_ID	YEAR	ELEV_FROM	ELEV_TO	AREA	BW	BS	BA
SE	STORGLACIAEREN	332	2017	1680	1700	0.0381	2750	-860	1890
SE	STORGLACIAEREN	332	2017	1660	1680	0.058	2720	-750	1970
SE	STORGLACIAEREN	332	2017	1640	1660	0.1001	2710	-650	2050
SE	STORGLACIAEREN	332	2017	1620	1640	0.1445	2620	-570	2050
SE	STORGLACIAEREN	332	2017	1600	1620	0.1335	2440	-510	1930
SE	STORGLACIAEREN	332	2017	1580	1600	0.1233	2240	-450	1790
SE	STORGLACIAEREN	332	2017	1560	1580	0.1234	2010	-460	1550
SE	STORGLACIAEREN	332	2017	1540	1560	0.0953	1940	-540	1400
SE	STORGLACIAEREN	332	2017	1520	1540	0.0914	1940	-550	1400
SE	STORGLACIAEREN	332	2017	1500	1520	0.149	1960	-490	1470
SE	STORGLACIAEREN	332	2017	1480	1500	0.2095	1710	-630	1090
SE	STORGLACIAEREN	332	2017	1460	1480	0.0988	1440	-850	590
SE	STORGLACIAEREN	332	2017	1440	1460	0.0622	1360	-890	480
SE	STORGLACIAEREN	332	2017	1420	1440	0.0581	1340	-950	390
SE	STORGLACIAEREN	332	2017	1400	1420	0.0887	1290	-1030	260
SE	STORGLACIAEREN	332	2017	1380	1400	0.1675	1170	-1200	-30
SE	STORGLACIAEREN	332	2017	1360	1380	0.2635	980	-1300	-320
SE	STORGLACIAEREN	332	2017	1340	1360	0.2866	830	-1350	-520
SE	STORGLACIAEREN	332	2017	1320	1340	0.1743	790	-1700	-910
SE	STORGLACIAEREN	332	2017	1300	1320	0.0957	870	-1800	-930
SE	STORGLACIAEREN	332	2017	1280	1300	0.0705	910	-1750	-840
SE	STORGLACIAEREN	332	2017	1260	1280	0.074	950	-2020	-1060
SE	STORGLACIAEREN	332	2017	1240	1260	0.0658	1000	-2180	-1190
SE	STORGLACIAEREN	332	2017	1220	1240	0.0486	1030	-2340	-1310
SE	STORGLACIAEREN	332	2017	1200	1220	0.0339	1070	-2530	-1460
SE	STORGLACIAEREN	332	2017	1180	1200	0.0166	1110	-2700	-1590
SE	STORGLACIAEREN	332	2017	1160	1180	0.0062	1130	-2800	-1670
SJ - Svalbard (Norway)									
SJ	HANSBREEN	306	2016	450	500	6.71	1296	-816	480
SJ	HANSBREEN	306	2016	400	450	7.39	1208	-1436	-228
SJ	HANSBREEN	306	2016	350	400	8.1	972	-1476	-504
SJ	HANSBREEN	306	2016	300	350	8.56	828	-1332	-504
SJ	HANSBREEN	306	2016	250	300	8.25	736	-2026	-1290
SJ	HANSBREEN	306	2016	200	250	6.58	716	-2723	-2007
SJ	HANSBREEN	306	2016	150	200	5.13	544	-3028	-2484
SJ	HANSBREEN	306	2016	100	150	3.82	416	-3188	-2772
SJ	HANSBREEN	306	2016	0	100	2.22	404	-3644	-3240
SJ	HANSBREEN	306	2017	450	500	6.71	1184	772	413
SJ	HANSBREEN	306	2017	400	450	7.39	1372	-1252	120
SJ	HANSBREEN	306	2017	350	400	8.1	1160	-1601	-441
SJ	HANSBREEN	306	2017	300	350	8.56	1040	-1868	-828
SJ	HANSBREEN	306	2017	250	300	8.25	860	-1616	-756
SJ	HANSBREEN	306	2017	200	250	6.58	832	-1894	-1062
SJ	HANSBREEN	306	2017	150	200	5.13	508	-2002	-1494
SJ	HANSBREEN	306	2017	100	150	3.82	360	-2475	-2115
SJ	HANSBREEN	306	2017	0	100	2.22	560	-2180	-1620
SJ	WALDEMARBREEN	2307	2016	500	550	0.076			-550
SJ	WALDEMARBREEN	2307	2016	450	500	0.107			-750
SJ	WALDEMARBREEN	2307	2016	400	450	0.326			-976
SJ	WALDEMARBREEN	2307	2016	350	400	0.3			-1413
SJ	WALDEMARBREEN	2307	2016	300	350	0.268			-1698
SJ	WALDEMARBREEN	2307	2016	250	300	0.457			-1875
SJ	WALDEMARBREEN	2307	2016	200	250	0.579			-2165
SJ	WALDEMARBREEN	2307	2016	150	200	0.283			-2862
SJ	WALDEMARBREEN	2307	2016	100	150	0.005			-3140
SJ	WALDEMARBREEN	2307	2017	500	550	0.076			50
SJ	WALDEMARBREEN	2307	2017	450	500	0.107			-150
SJ	WALDEMARBREEN	2307	2017	400	450	0.326			-415
SJ	WALDEMARBREEN	2307	2017	350	400	0.3			-824
SJ	WALDEMARBREEN	2307	2017	300	350	0.268			-1366
SJ	WALDEMARBREEN	2307	2017	250	300	0.457			-1602
SJ	WALDEMARBREEN	2307	2017	200	250	0.579			-1939
SJ	WALDEMARBREEN	2307	2017	150	200	0.283			-2573
SJ	WALDEMARBREEN	2307	2017	100	150	0.005			-3140
SJ	WERENSKIOLDBREEN	305	2016	600	750	0.76	996	-1575	-579
SJ	WERENSKIOLDBREEN	305	2016	500	600	3.56	846	-1855	-1009
SJ	WERENSKIOLDBREEN	305	2016	400	500	7.39	696	-2135	-1439
SJ	WERENSKIOLDBREEN	305	2016	300	400	7.66	546	-2415	-1869
SJ	WERENSKIOLDBREEN	305	2016	200	300	4.24	396	-2695	-2299
SJ	WERENSKIOLDBREEN	305	2016	100	200	2.61	246	-2975	-2729
SJ	WERENSKIOLDBREEN	305	2016	0	100	0.89	96	-3255	-3159
SJ	WERENSKIOLDBREEN	305	2017	600	750	0.76	1129	-10	1119
SJ	WERENSKIOLDBREEN	305	2017	500	600	3.56	989	-542	447
SJ	WERENSKIOLDBREEN	305	2017	400	500	7.39	849	-1132	-283
SJ	WERENSKIOLDBREEN	305	2017	300	400	7.66	709	-1722	-1013
SJ	WERENSKIOLDBREEN	305	2017	200	300	4.24	569	-2312	-1743
SJ	WERENSKIOLDBREEN	305	2017	100	200	2.61	429	-2902	-2473
SJ	WERENSKIOLDBREEN	305	2017	0	100	0.89	289	-3492	-3203
US - United States of America									
US	COLUMBIA (2057)	76	2016	1700	1800	0.04			400
US	COLUMBIA (2057)	76	2016	1650	1700	0.12			250
US	COLUMBIA (2057)	76	2016	1600	1650	0.28			-850
US	COLUMBIA (2057)	76	2016	1550	1600	0.19			-1450
US	COLUMBIA (2057)	76	2016	1500	1550	0.12			-2200
US	COLUMBIA (2057)	76	2016	1450	1500	0.05			-4300
US	COLUMBIA (2057)	76	2017	1700	1725	0.04			900
US	COLUMBIA (2057)	76	2017	1650	1700	0.12			600
US	COLUMBIA (2057)	76	2017	1600	1650	0.28			0
US	COLUMBIA (2057)	76	2017	1550	1600	0.19			-1400
US	COLUMBIA (2057)	76	2017	1500	1550	0.12			-2400
US	COLUMBIA (2057)	76	2017	1455	1500	0.04			-3600
US	RAINBOW	79	2017	1950	2200	0.38			1800
US	RAINBOW	79	2017	1850	1950	0.22			1300
US	RAINBOW	79	2017	1750	1850	0.27			600

PU	GLACIER_NAME	WGMS_ID	YEAR	ELEV_FROM	ELEV_TO	AREA	BW	BS	BA
US	RAINBOW	79	2017	1650	1750	0.22			300
US	RAINBOW	79	2017	1550	1650	0.19			-500
US	RAINBOW	79	2017	1450	1550	0.13			-2100
US	RAINBOW	79	2017	1340	1450	0.03			-3200

APPENDIX - Table 5

MASS BALANCE POINT DATA 2016–2017

PU	Political unit, alphabetic 2-digit country code (cf. www.iso.org)
GLACIER NAME	Name of the glacier in capital letters, cf. Appendix Table 1
WGMS ID	Key identifier of the glacier, cf. Appendix Table 1
FROM	Starting date measurements in format YYYYMMDD*
TO	Ending date measurements in format YYYYMMDD*
POINT_ID	Key identifier of the measurement point
LAT	Latitude of measurement point in decimal degrees north (positive) or south (negative)
LON	Longitude of measurement point in decimal degrees east (positive) or west (negative)
ELEV	Elevation of the measurement point in metres above sea level
MB	Surface mass balance in mm water equivalent
MB_CODE	BW = Winter balance in mm water equivalent
	BS = Summer balance in mm water equivalent
	BA = Annual balance in mm water equivalent
	IN = Balance at index point

*Unknown month or day are each replaced by „99“

PU	GLACIER_NAME	WGMS_ID	FROM	TO	POINT_ID	LAT	LON	ELEV	MB	MB_CODE
AQ - Antarctica										
AQ	BAHIA DEL DIABLO	2665	20150301	20160228	23			637	-207	BA
AQ	BAHIA DEL DIABLO	2665	20150301	20160228	21			588	250	BA
AQ	BAHIA DEL DIABLO	2665	20150301	20160228	22			553	432	BA
AQ	BAHIA DEL DIABLO	2665	20150301	20160228	20			551	-43	BA
AQ	BAHIA DEL DIABLO	2665	20150301	20160228	24			519	-343	BA
AQ	BAHIA DEL DIABLO	2665	20150301	20160228	19			515	-150	BA
AQ	BAHIA DEL DIABLO	2665	20150301	20160228	18			505	-129	BA
AQ	BAHIA DEL DIABLO	2665	20150301	20160228	16			464	-1146	BA
AQ	BAHIA DEL DIABLO	2665	20150301	20160228	15			458	6	BA
AQ	BAHIA DEL DIABLO	2665	20150301	20160228	14			456	-1222	BA
AQ	BAHIA DEL DIABLO	2665	20150301	20160228	17			445	0	BA
AQ	BAHIA DEL DIABLO	2665	20150301	20160228	13			442	-570	BA
AQ	BAHIA DEL DIABLO	2665	20150301	20160228	12			398	-225	BA
AQ	BAHIA DEL DIABLO	2665	20150301	20160228	11			375	-549	BA
AQ	BAHIA DEL DIABLO	2665	20150301	20160228	10			288	-612	BA
AQ	BAHIA DEL DIABLO	2665	20150301	20160228	9			273	-608	BA
AQ	BAHIA DEL DIABLO	2665	20150301	20160228	7			272	-1458	BA
AQ	BAHIA DEL DIABLO	2665	20150301	20160228	8			272	-783	BA
AQ	BAHIA DEL DIABLO	2665	20150301	20160228	6			270	-1143	BA
AQ	BAHIA DEL DIABLO	2665	20150301	20160228	5			205	-981	BA
AQ	BAHIA DEL DIABLO	2665	20150301	20160228	4			167	-1269	BA
AQ	BAHIA DEL DIABLO	2665	20150301	20160228	3			139	-1125	BA
AQ	BAHIA DEL DIABLO	2665	20150301	20160228	2			115	-1521	BA
AQ	BAHIA DEL DIABLO	2665	20150301	20160228	1			100	-1566	BA
AQ	BAHIA DEL DIABLO	2665	20160301	20170228	23			637	1183	BA
AQ	BAHIA DEL DIABLO	2665	20160301	20170228	21			588	-334	BA
AQ	BAHIA DEL DIABLO	2665	20160301	20170228	22			553	120	BA
AQ	BAHIA DEL DIABLO	2665	20160301	20170228	20			551	-163	BA
AQ	BAHIA DEL DIABLO	2665	20160301	20170228	24			519	56	BA
AQ	BAHIA DEL DIABLO	2665	20160301	20170228	19			515	104	BA
AQ	BAHIA DEL DIABLO	2665	20160301	20170228	18			505	-424	BA
AQ	BAHIA DEL DIABLO	2665	20160301	20170228	16			464	1312	BA
AQ	BAHIA DEL DIABLO	2665	20160301	20170228	15			458	700	BA
AQ	BAHIA DEL DIABLO	2665	20160301	20170228	14			456	80	BA
AQ	BAHIA DEL DIABLO	2665	20160301	20170228	17			445	360	BA
AQ	BAHIA DEL DIABLO	2665	20160301	20170228	13			442	60	BA
AQ	BAHIA DEL DIABLO	2665	20160301	20170228	12			398	-422	BA
AQ	BAHIA DEL DIABLO	2665	20160301	20170228	11			375	-95	BA
AQ	BAHIA DEL DIABLO	2665	20160301	20170228	10			288	-639	BA
AQ	BAHIA DEL DIABLO	2665	20160301	20170228	9			273	-621	BA
AQ	BAHIA DEL DIABLO	2665	20160301	20170228	7			272	-612	BA
AQ	BAHIA DEL DIABLO	2665	20160301	20170228	8			272	0	BA
AQ	BAHIA DEL DIABLO	2665	20160301	20170228	6			270	-846	BA
AQ	BAHIA DEL DIABLO	2665	20160301	20170228	5			205	-729	BA
AQ	BAHIA DEL DIABLO	2665	20160301	20170228	4			167	-765	BA
AQ	BAHIA DEL DIABLO	2665	20160301	20170228	3			139	-1080	BA
AQ	BAHIA DEL DIABLO	2665	20160301	20170228	2			115	-1350	BA
AQ	BAHIA DEL DIABLO	2665	20160301	20170228	1			100	-1287	BA
AR - Argentina										
AR	DE LOS TRES	1675	20150323	20160502	X-XIII	-49.27446	-73.00537	1472	-215	BA
AR	DE LOS TRES	1675	20150322	20160501	XVI-XIII	-49.27165	-73.00147	1442	-220	BA
AR	DE LOS TRES	1675	20160501	20161019	XII-XIII	-49.27238	-72.99946	1423	382	BW
AR	DE LOS TRES	1675	20150323	20160501	XII-XIII	-49.27238	-72.99946	1423	-161	BA
AR	DE LOS TRES	1675	20150322	20160502	XV-XIII	-49.27575	-73.00364	1401	-2889	BA
AR	DE LOS TRES	1675	20160503	20161018	XV-XVI	-49.27572	-73.00355	1401	334	BW
AR	DE LOS TRES	1675	20160501	20161018	VIII-XIII	-49.27325	-72.00202	1392	291	BW
AR	DE LOS TRES	1675	20150322	20160501	VIII-XIII	-49.27325	-72.00202	1392	-1766	BA
AR	DE LOS TRES	1675	20160503	20161018	VI-XVI	-49.27559	-73.00198	1357	311	BW
AR	DE LOS TRES	1675	20150321	20160501	VII-XIII	-49.27454	-72.99988	1340	-3088	BA
AR	DE LOS TRES	1675	20160502	20161019	VII-XVI	-49.27467	-72.99962	1330	330	BW
AR	DE LOS TRES	1675	20150321	20160501	V-XV	-49.27562	-72.99873	1285	-3763	BA
AR	DE LOS TRES	1675	20160501	20161018	III-XVI	-49.27614	-72.99911	1276	290	BW
AR	DE LOS TRES	1675	20150321	20160501	III-XV	-49.27616	-72.9991	1275	-4758	BA
AR	DE LOS TRES	1675	20150323	20160501	I-XV	-49.27598	-72.99826	1269	-5016	BA
AR	DE LOS TRES	1675	20150321	20151006	IV-XIII	-49.2752	-72.99681	1266	-692	BA
AR	DE LOS TRES	1675	20160501	20161020	I-XVI	-49.2761	-72.99811	1263	151	BW
AR	DE LOS TRES	1675	20150322	20160502	II-XIV	-49.27559	-72.9968	1247	-1582	BA
AR	DE LOS TRES	1675	20160501	20170424	XII-XIII	-49.27238	-72.99946	1423	-1977	BA
AR	DE LOS TRES	1675	20160503	20170424	XV-XVI	-49.27572	-73.00355	1401	-3039	BA
AR	DE LOS TRES	1675	20160501	20170424	VIII-XIII	-49.27325	-72.00202	1392	-2592	BA
AR	DE LOS TRES	1675	20160503	20170424	VI-XVI	-49.27559	-73.00198	1357	-2703	BA
AR	DE LOS TRES	1675	20160502	20170423	VII-XVI	-49.27467	-72.99962	1330	-2617	BA
AR	DE LOS TRES	1675	20160501	20170423	III-XVI	-49.27614	-72.99911	1276	-4333	BA
AR	DE LOS TRES	1675	20160501	20170423	I-XVI	-49.2761	-72.99811	1263	-4934	BA
AR	MARTIAL ESTE	2000	20151001	20160331	11	-54.78128	-68.40542	1112	-759	BS
AR	MARTIAL ESTE	2000	20150401	20160331	11	-54.78128	-68.40542	1112	513	BA
AR	MARTIAL ESTE	2000	20150401	20151001	11	-54.78128	-68.40542	1112	1272	BW
AR	MARTIAL ESTE	2000	20150401	20160331	7	-54.78098	-68.40417	1096	958	BA
AR	MARTIAL ESTE	2000	20151001	20160331	7	-54.78098	-68.40417	1096	-403	BS
AR	MARTIAL ESTE	2000	20150401	20151001	7	-54.78098	-68.40417	1096	1361	BW
AR	MARTIAL ESTE	2000	20150401	20151001	6	-54.78144	-68.40492	1092	1332	BW
AR	MARTIAL ESTE	2000	20150401	20160331	6	-54.78144	-68.40492	1092	941	BA
AR	MARTIAL ESTE	2000	20151001	20160331	6	-54.78144	-68.40492	1092	-391	BS
AR	MARTIAL ESTE	2000	20151001	20160331	5	-54.78193	-68.40527	1091	-421	BS
AR	MARTIAL ESTE	2000	20150401	20160331	5	-54.78193	-68.40527	1091	990	BA
AR	MARTIAL ESTE	2000	20150401	20151001	5	-54.78193	-68.40527	1091	1411	BW
AR	MARTIAL ESTE	2000	20151001	20160331	9	-54.78099	-68.40289	1077	-859	BS
AR	MARTIAL ESTE	2000	20150401	20160331	9	-54.78099	-68.40289	1077	319	BA
AR	MARTIAL ESTE	2000	20150401	20151001	9	-54.78099	-68.40289	1077	1178	BW
AR	MARTIAL ESTE	2000	20150401	20151001	10	-54.78052	-68.40187	1072	1292	BW
AR	MARTIAL ESTE	2000	20151001	20160331	10	-54.78052	-68.40187	1072	-1044	BS
AR	MARTIAL ESTE	2000	20150401	20160331	10	-54.78052	-68.40187	1072	248	BA
AR	MARTIAL ESTE	2000	20151001	20160331	8	-54.78137	-68.4034	1065	-678	BS
AR	MARTIAL ESTE	2000	20150401	20160331	8	-54.78137	-68.4034	1065	661	BA

PU	GLACIER_NAME	WGMS_ID	FROM	TO	POINT_ID	LAT	LON	ELEV	MB	MB_CODE
AR	MARTIAL ESTE	2000	20150401	20151001	8	-54.78137	-68.4034	1065	1339	BW
AR	MARTIAL ESTE	2000	20151001	20160331	4	-54.78206	-68.40423	1065	-777	BS
AR	MARTIAL ESTE	2000	20150401	20160331	4	-54.78206	-68.40423	1065	471	BA
AR	MARTIAL ESTE	2000	20150401	20151001	4	-54.78206	-68.40423	1065	1248	BW
AR	MARTIAL ESTE	2000	20150401	20160331	1	-54.78138	-68.4016	1033	-502	BA
AR	MARTIAL ESTE	2000	20150401	20151001	1	-54.78138	-68.4016	1033	1086	BW
AR	MARTIAL ESTE	2000	20151001	20160331	1	-54.78138	-68.4016	1033	-1588	BS
AR	MARTIAL ESTE	2000	20151001	20160331	3	-54.78227	-68.40289	1028	-1906	BS
AR	MARTIAL ESTE	2000	20150401	20160331	3	-54.78227	-68.40289	1028	-1082	BA
AR	MARTIAL ESTE	2000	20150401	20151001	3	-54.78227	-68.40289	1028	824	BW
AR	MARTIAL ESTE	2000	20150401	20151001	2	-54.78201	-68.4021	1024	892	BW
AR	MARTIAL ESTE	2000	20150401	20160331	2	-54.78201	-68.4021	1024	-1725	BA
AR	MARTIAL ESTE	2000	20151001	20160331	2	-54.78201	-68.4021	1024	-2617	BS
AR	MARTIAL ESTE	2000	20160401	20161016	11	-54.78126	-68.40544	1113	407	BW
AR	MARTIAL ESTE	2000	20161016	20170331	11	-54.78126	-68.40544	1113	-963	BS
AR	MARTIAL ESTE	2000	20160401	20170331	11	-54.78126	-68.40544	1113	-556	BA
AR	MARTIAL ESTE	2000	20160401	20170331	7	-54.78098	-68.40417	1095	153	BA
AR	MARTIAL ESTE	2000	20161016	20170331	7	-54.78098	-68.40417	1095	-569	BS
AR	MARTIAL ESTE	2000	20160401	20161016	7	-54.78098	-68.40417	1095	722	BW
AR	MARTIAL ESTE	2000	20160401	20170331	6	-54.78144	-68.40492	1092	209	BA
AR	MARTIAL ESTE	2000	20161016	20170331	6	-54.78144	-68.40492	1092	-616	BS
AR	MARTIAL ESTE	2000	20160401	20161016	6	-54.78144	-68.40492	1092	825	BW
AR	MARTIAL ESTE	2000	20161016	20170331	5	-54.78193	-68.40527	1091	-655	BS
AR	MARTIAL ESTE	2000	20160401	20161016	5	-54.78193	-68.40527	1091	870	BW
AR	MARTIAL ESTE	2000	20160401	20170331	5	-54.78193	-68.40527	1091	215	BA
AR	MARTIAL ESTE	2000	20161016	20170331	9	-54.78086	-68.40288	1077	-914	BS
AR	MARTIAL ESTE	2000	20160401	20170331	9	-54.78086	-68.40288	1077	-450	BA
AR	MARTIAL ESTE	2000	20160401	20161016	9	-54.78086	-68.40288	1077	464	BW
AR	MARTIAL ESTE	2000	20161016	20170331	10	-54.78052	-68.40184	1071	-1125	BS
AR	MARTIAL ESTE	2000	20160401	20170331	10	-54.78052	-68.40184	1071	-588	BA
AR	MARTIAL ESTE	2000	20160401	20161016	10	-54.78052	-68.40184	1071	537	BW
AR	MARTIAL ESTE	2000	20161016	20170331	8	-54.78137	-68.4034	1065	-1160	BS
AR	MARTIAL ESTE	2000	20161016	20170331	4	-54.78206	-68.40423	1065	-1130	BS
AR	MARTIAL ESTE	2000	20160401	20161016	8	-54.78137	-68.4034	1065	664	BW
AR	MARTIAL ESTE	2000	20160401	20170331	8	-54.78137	-68.4034	1065	-496	BA
AR	MARTIAL ESTE	2000	20160401	20161016	4	-54.78206	-68.40423	1065	612	BW
AR	MARTIAL ESTE	2000	20160401	20170331	4	-54.78206	-68.40423	1065	-518	BA
AR	MARTIAL ESTE	2000	20160401	20170331	1	-54.7814	-68.40158	1032	-1118	BA
AR	MARTIAL ESTE	2000	20160401	20161016	1	-54.7814	-68.40158	1032	425	BW
AR	MARTIAL ESTE	2000	20161016	20170331	1	-54.7814	-68.40158	1032	-1543	BS
AR	MARTIAL ESTE	2000	20161016	20170331	3	-54.78227	-68.40289	1027	-2217	BS
AR	MARTIAL ESTE	2000	20160401	20161016	3	-54.78227	-68.40289	1027	228	BW
AR	MARTIAL ESTE	2000	20160401	20170331	3	-54.78227	-68.40289	1027	-1989	BA
AR	MARTIAL ESTE	2000	20160401	20161016	2	-54.78203	-68.4021	1023	228	BW
AR	MARTIAL ESTE	2000	20161016	20170331	2	-54.78203	-68.4021	1023	-2226	BS
AR	MARTIAL ESTE	2000	20160401	20170331	2	-54.78203	-68.4021	1023	-1998	BA
AT - Austria										
AT	HINTEREIS F.	491	20151001	20160930	108	46.8032	10.7455	3434	-1317	BA
AT	HINTEREIS F.	491	20151001	20160930	HEJ	46.792	10.7346	3321	489	BA
AT	HINTEREIS F.	491	20151001	20160430	HEJ	46.792	10.7346	3321	1222	BW
AT	HINTEREIS F.	491	20151001	20160930	SST	46.7965	10.7365	3270	505	BA
AT	HINTEREIS F.	491	20151001	20160930	13	46.7956	10.7377	3233	579	BA
AT	HINTEREIS F.	491	20151001	20160930	SSJ	46.7881	10.7391	3232	703	BA
AT	HINTEREIS F.	491	20151001	20160930	107	46.7991	10.7445	3213	-1473	BA
AT	HINTEREIS F.	491	20151001	20160930	14	46.7947	10.7389	3210	299	BA
AT	HINTEREIS F.	491	20151001	20160930	106	46.7958	10.7398	3205	-1128	BA
AT	HINTEREIS F.	491	20151001	20160930	206	46.8092	10.7519	3165	-1727	BA
AT	HINTEREIS F.	491	20151001	20160930	B22	46.8079	10.7533	3163	304	BA
AT	HINTEREIS F.	491	20151001	20160930	WKJ	46.7968	10.7416	3155	189	BA
AT	HINTEREIS F.	491	20151001	20160430	WKJ	46.7968	10.7416	3155	973	BW
AT	HINTEREIS F.	491	20151001	20160930	44	46.7898	10.7431	3150	495	BA
AT	HINTEREIS F.	491	20151001	20160930	105	46.7938	10.742	3139	-1049	BA
AT	HINTEREIS F.	491	20151001	20160930	109	46.7978	10.7493	3137	-1314	BA
AT	HINTEREIS F.	491	20151001	20160930	B1	46.7917	10.7421	3120	265	BA
AT	HINTEREIS F.	491	20151001	20160930	205	46.8089	10.7556	3116	-861	BA
AT	HINTEREIS F.	491	20151001	20160930	104	46.7926	10.7452	3095	-1815	BA
AT	HINTEREIS F.	491	20151001	20160430	LJF	46.81	10.7454	3092	1087	BW
AT	HINTEREIS F.	491	20151001	20160930	204	46.8111	10.7567	3066	-892	BA
AT	HINTEREIS F.	491	20151001	20160930	203	46.8097	10.7592	3053	-1082	BA
AT	HINTEREIS F.	491	20151001	20160430	TEE	46.791	10.747	3044	996	BW
AT	HINTEREIS F.	491	20151001	20160930	TE_Bambus	46.7904	10.7496	3039	-876	BA
AT	HINTEREIS F.	491	20151001	20160930	TE12	46.7914	10.7504	3022	-1004	BA
AT	HINTEREIS F.	491	20151001	20160930	202/14	46.8111	10.7614	3008	-2032	BA
AT	HINTEREIS F.	491	20151001	20160930	101	46.7939	10.7529	2989	-1276	BA
AT	HINTEREIS F.	491	20151001	20160930	103	46.7912	10.7536	2976	-1169	BA
AT	HINTEREIS F.	491	20151001	20160930	202/15	46.8112	10.7631	2933	-2032	BA
AT	HINTEREIS F.	491	20151001	20160930	98	46.7941	10.7581	2929	-1673	BA
AT	HINTEREIS F.	491	20151001	20160930	94/15	46.7915	10.7576	2929	-1216	BA
AT	HINTEREIS F.	491	20151001	20160930	L3/15	46.7929	10.7589	2916	-1502	BA
AT	HINTEREIS F.	491	20151001	20160930	73	46.795	10.7609	2897	-1364	BA
AT	HINTEREIS F.	491	20151001	20160930	89	46.7932	10.7621	2893	-1442	BA
AT	HINTEREIS F.	491	20151001	20160930	95	46.7924	10.7629	2892	-1483	BA
AT	HINTEREIS F.	491	20151001	20160930	L4/15	46.794	10.7643	2878	-1468	BA
AT	HINTEREIS F.	491	20151001	20160930	79	46.7951	10.7641	2878	-1793	BA
AT	HINTEREIS F.	491	20151001	20160930	88	46.7954	10.767	2848	-1669	BA
AT	HINTEREIS F.	491	20151001	20160930	201/15	46.8109	10.768	2838	-2838	BA
AT	HINTEREIS F.	491	20151001	20160930	72	46.7975	10.7664	2831	-2091	BA
AT	HINTEREIS F.	491	20151001	20160930	102	46.7964	10.7709	2830	-2147	BA
AT	HINTEREIS F.	491	20151001	20160930	p34	46.7945	10.7693	2789	-1739	BA
AT	HINTEREIS F.	491	20151001	20160930	L5/15	46.7982	10.7696	2762	-2069	BA
AT	HINTEREIS F.	491	20151001	20160930	L6/15	46.8032	10.7728	2742	-2793	BA
AT	HINTEREIS F.	491	20151001	20160430	L6	46.806	10.773	2738	836	BW
AT	HINTEREIS F.	491	20151001	20160930	71	46.7997	10.7679	2727	-2145	BA
AT	HINTEREIS F.	491	20151001	20160930	51	46.8063	10.7724	2711	-3081	BA
AT	HINTEREIS F.	491	20151001	20160930	p25	46.8018	10.7687	2705	-2462	BA

PU	GLACIER_NAME	WGMS_ID	FROM	TO	POINT_ID	LAT	LON	ELEV	MB	MB_CODE
AT	HINTEREIS F.	491	20151001	20160930	p26	46.8007	10.7735	2704	-2694	BA
AT	HINTEREIS F.	491	20151001	20160930	p22	46.8048	10.7766	2655	-3804	BA
AT	HINTEREIS F.	491	20151001	20160930	42	46.8099	10.7787	2646	-5715	BA
AT	HINTEREIS F.	491	20151001	20160930	87	46.8065	10.7755	2644	-3183	BA
AT	HINTEREIS F.	491	20151001	20160930	L7/15	46.8081	10.7779	2616	-4242	BA
AT	HINTEREIS F.	491	20151001	20160930	38	46.812	10.7837	2589	-4581	BA
AT	HINTEREIS F.	491	20151001	20160930	50/15	46.8081	10.7811	2584	-4800	BA
AT	HINTEREIS F.	491	20151001	20160930	L9/15	46.8128	10.7874	2570	-6234	BA
AT	HINTEREIS F.	491	20151001	20160930	L8/15	46.8103	10.782	2565	-4839	BA
AT	HINTEREIS F.	491	20151001	20160930	41	46.8108	10.7853	2534	-4680	BA
AT	HINTEREIS F.	491	20151001	20160430	AWS	46.813	10.789	2525	747	BW
AT	HINTEREIS F.	491	20151001	20160930	27a	46.8139	10.7896	2521	-7155	BA
AT	HINTEREIS F.	491	20151001	20160930	L10/15	46.8154	10.7922	2496	-6045	BA
AT	HINTEREIS F.	491	20161001	20170930	108	46.8032	10.7455	3430	-1935	BA
AT	HINTEREIS F.	491	20161001	20170430	HEJ	46.7922	10.73374	3329	1401	BW
AT	HINTEREIS F.	491	20161001	20170930	HEJ	46.7919	10.7346	3320	223	BA
AT	HINTEREIS F.	491	20161001	20170930	111	46.789	10.7358	3287	-310	BA
AT	HINTEREIS F.	491	20161001	20170930	SST	46.7974	10.7367	3285	276	BA
AT	HINTEREIS F.	491	20161001	20170930	112	46.7971	10.7365	3285	-96	BA
AT	HINTEREIS F.	491	20161001	20170930	110	46.788	10.7396	3230	-460	BA
AT	HINTEREIS F.	491	20161001	20170930	107	46.799	10.7445	3210	-2024	BA
AT	HINTEREIS F.	491	20161001	20170930	207	46.8077	10.7521	3196	-49	BA
AT	HINTEREIS F.	491	20161001	20170930	106	46.7958	10.7401	3194	-2339	BA
AT	HINTEREIS F.	491	20161001	20170930	B22/1	46.8072	10.7531	3188	183	BA
AT	HINTEREIS F.	491	20161001	20170930	116	46.8018	10.7537	3183	-450	BA
AT	HINTEREIS F.	491	20161001	20170930	114	46.7918	10.74	3171	-450	BA
AT	HINTEREIS F.	491	20161001	20170930	B22/2	46.8082	10.753	3168	177	BA
AT	HINTEREIS F.	491	20161001	20170930	WKJ	46.7968	10.7421	3157	223	BA
AT	HINTEREIS F.	491	20161001	20170430	LJF	46.79723	10.74382	3154	1174	BW
AT	HINTEREIS F.	491	20161001	20170930	206	46.8093	10.752	3151	-2604	BA
AT	HINTEREIS F.	491	20161001	20170930	109	46.7978	10.7493	3133	-2006	BA
AT	HINTEREIS F.	491	20161001	20170930	105	46.7938	10.7424	3128	-2014	BA
AT	HINTEREIS F.	491	20161001	20170930	113	46.7969	10.7464	3121	-441	BA
AT	HINTEREIS F.	491	20161001	20170930	205	46.8089	10.7557	3116	-2362	BA
AT	HINTEREIS F.	491	20161001	20170430	WKJ	46.81071	10.75424	3097	1030	BW
AT	HINTEREIS F.	491	20161001	20170930	100	46.787	10.7557	3097	-415	BA
AT	HINTEREIS F.	491	20161001	20170930	104	46.7926	10.7457	3085	-1742	BA
AT	HINTEREIS F.	491	20161001	20170930	204	46.8112	10.7569	3066	-1503	BA
AT	HINTEREIS F.	491	20161001	20170930	203	46.8097	10.7593	3053	-1258	BA
AT	HINTEREIS F.	491	20161001	20170430	TEE	46.79103	10.74972	3035	968	BW
AT	HINTEREIS F.	491	20161001	20170930	TE_B	46.7903	10.7497	3033	-1487	BA
AT	HINTEREIS F.	491	20161001	20170930	101	46.7939	10.7533	2975	-2282	BA
AT	HINTEREIS F.	491	20161001	20170930	103	46.7912	10.7541	2966	-1901	BA
AT	HINTEREIS F.	491	20161001	20170930	202/15	46.8112	10.7633	2933	-2828	BA
AT	HINTEREIS F.	491	20161001	20170930	94	46.7915	10.7581	2923	-2141	BA
AT	HINTEREIS F.	491	20161001	20170930	L3	46.7929	10.7579	2921	-2179	BA
AT	HINTEREIS F.	491	20161001	20170930	98	46.7941	10.7583	2918	-2580	BA
AT	HINTEREIS F.	491	20161001	20170930	89	46.7933	10.7624	2888	-2245	BA
AT	HINTEREIS F.	491	20161001	20170930	73	46.795	10.761	2880	-2383	BA
AT	HINTEREIS F.	491	20161001	20170930	L4	46.794	10.7645	2869	-2603	BA
AT	HINTEREIS F.	491	20161001	20170930	79	46.7952	10.7643	2864	-2693	BA
AT	HINTEREIS F.	491	20161001	20170930	88	46.7957	10.7675	2842	-2841	BA
AT	HINTEREIS F.	491	20161001	20170930	201/15	46.8108	10.7683	2838	-1691	BA
AT	HINTEREIS F.	491	20161001	20170930	p34	46.7946	10.7695	2832	-2492	BA
AT	HINTEREIS F.	491	20161001	20170930	102	46.7966	10.771	2819	-3311	BA
AT	HINTEREIS F.	491	20161001	20170930	L5	46.7984	10.7697	2809	-3195	BA
AT	HINTEREIS F.	491	20161001	20170930	71/16	46.7997	10.7679	2780	-2801	BA
AT	HINTEREIS F.	491	20161001	20170930	p25/16	46.8018	10.7688	2752	-2993	BA
AT	HINTEREIS F.	491	20161001	20170430	L6	46.80156	10.77063	2749	814	BW
AT	HINTEREIS F.	491	20161001	20170930	p26	46.8008	10.7736	2745	-2826	BA
AT	HINTEREIS F.	491	20161001	20170930	L6	46.8034	10.7729	2728	-3413	BA
AT	HINTEREIS F.	491	20161001	20170930	51/16	46.8063	10.7722	2704	-3680	BA
AT	HINTEREIS F.	491	20161001	20170930	p22	46.8049	10.7768	2704	-4272	BA
AT	HINTEREIS F.	491	20161001	20170930	87	46.8065	10.7755	2692	-4196	BA
AT	HINTEREIS F.	491	20161001	20170930	L7	46.8081	10.7779	2652	-4805	BA
AT	HINTEREIS F.	491	20161001	20170930	42	46.81	10.7788	2633	-4420	BA
AT	HINTEREIS F.	491	20161001	20170930	50	46.8082	10.7812	2627	-5390	BA
AT	HINTEREIS F.	491	20161001	20170930	L8	46.8103	10.782	2604	-5461	BA
AT	HINTEREIS F.	491	20161001	20170930	38	46.812	10.7835	2570	-4761	BA
AT	HINTEREIS F.	491	20161001	20170930	41	46.8107	10.7851	2570	-5083	BA
AT	HINTEREIS F.	491	20161001	20170930	L9	46.8127	10.7874	2542	-5281	BA
AT	HINTEREIS F.	491	20161001	20170930	27a	46.8139	10.7896	2508	-6316	BA
AT	HINTEREIS F.	491	20161001	20170430	AWS	46.81398	10.79016	2503	360	BW
AT	HINTEREIS F.	491	20161001	20170930	10	46.8153	10.792	2476	-6624	BA
AT	KESSELWAND F.	507	20151001	20160930	KWF19/15	46.8531	10.787	3308	-18	BA
AT	KESSELWAND F.	507	20151001	20160930	SS1	46.8522	10.7838	3287	563	BA
AT	KESSELWAND F.	507	20151001	20160930	SS2	46.8496	10.7815	3266	504	BA
AT	KESSELWAND F.	507	20151001	20160930	SS3	46.8483	10.7822	3254	729	BA
AT	KESSELWAND F.	507	20151001	20160930	KWF17/15	46.8487	10.7893	3239	-213	BA
AT	KESSELWAND F.	507	20151001	20160930	KWF18/15	46.8461	10.7823	3237	48	BA
AT	KESSELWAND F.	507	20151001	20160930	KWF13/15	46.8472	10.7944	3218	-1028	BA
AT	KESSELWAND F.	507	20151001	20160930	KWF16/15	46.841	10.7862	3181	-884	BA
AT	KESSELWAND F.	507	20151001	20160930	KWF12/16	46.8436	10.7886	3178	-888	BA
AT	KESSELWAND F.	507	20151001	20160930	KWF10/15	46.8407	10.7887	3158	-993	BA
AT	KESSELWAND F.	507	20151001	20160930	KWF11/15	46.8431	10.795	3141	-850	BA
AT	KESSELWAND F.	507	20151001	20160930	KWF14/15	46.8344	10.7915	3136	-1514	BA
AT	KESSELWAND F.	507	20151001	20160930	KWF09/16	46.8417	10.7936	3129	-935	BA
AT	KESSELWAND F.	507	20151001	20160930	KWF07/15	46.8385	10.7917	3113	-1058	BA
AT	KESSELWAND F.	507	20151001	20160930	KWF15/15	46.8366	10.7911	3109	-776	BA
AT	KESSELWAND F.	507	20151001	20160930	KWF04/16	46.8344	10.7964	3089	-1687	BA
AT	KESSELWAND F.	507	20151001	20160930	KWF08/15	46.8395	10.795	3084	-951	BA
AT	KESSELWAND F.	507	20151001	20160930	KWF04/14	46.8344	10.7964	3083	-1821	BA
AT	KESSELWAND F.	507	20151001	20160930	KWF05/14	46.8371	10.7964	3071	-1338	BA
AT	KESSELWAND F.	507	20151001	20160930	KWF06/15	46.8398	10.799	3071	-1314	BA
AT	KESSELWAND F.	507	20151001	20160930	KWF03/16	46.8363	10.8009	3027	-1736	BA
AT	KESSELWAND F.	507	20161001	20170930	20/17	46.8509	10.7826	3266	118	BA

PU	GLACIER_NAME	WGMS_ID	FROM	TO	POINT_ID	LAT	LON	ELEV	MB	MB_CODE
AT	KESSELWAND F.	507	20161001	20170930	SS1	46.8522	10.7838	3263	273	BA
AT	KESSELWAND F.	507	20161001	20170930	SS2	46.8483	10.7822	3255	272	BA
AT	KESSELWAND F.	507	20161001	20170930	17/15	46.8486	10.7893	3234	-586	BA
AT	KESSELWAND F.	507	20161001	20170930	18/15	46.846	10.7824	3233	-6	BA
AT	KESSELWAND F.	507	20161001	20170930	19/15	46.853	10.787	3231	-427	BA
AT	KESSELWAND F.	507	20161001	20170930	13/15	46.8472	10.7943	3213	-171	BA
AT	KESSELWAND F.	507	20161001	20170930	SS3	46.8431	10.7813	3204	197	BA
AT	KESSELWAND F.	507	20161001	20170930	Dez 16	46.8435	10.789	3176	-919	BA
AT	KESSELWAND F.	507	20161001	20170930	16/15	46.841	10.7862	3171	-1483	BA
AT	KESSELWAND F.	507	20161001	20170930	Okt 15	46.8407	10.7889	3142	-1625	BA
AT	KESSELWAND F.	507	20161001	20170930	Nov 15	46.8429	10.7951	3140	-1370	BA
AT	KESSELWAND F.	507	20161001	20170930	Sep 16	46.8417	10.7937	3129	-1454	BA
AT	KESSELWAND F.	507	20161001	20170930	Jul 15	46.8385	10.7916	3112	-1714	BA
AT	KESSELWAND F.	507	20161001	20170930	15/15	46.8366	10.7912	3105	-1463	BA
AT	KESSELWAND F.	507	20161001	20170930	Mai 16	46.837	10.7968	3095	-2245	BA
AT	KESSELWAND F.	507	20161001	20170930	Apr 16	46.8344	10.7965	3083	-2471	BA
AT	KESSELWAND F.	507	20161001	20170930	Aug 15	46.8394	10.7952	3082	-1615	BA
AT	KESSELWAND F.	507	20161001	20170930	14/16	46.8345	10.7916	3079	-2853	BA
AT	KESSELWAND F.	507	20161001	20170930	Jun 16	46.8396	10.7992	3067	-2702	BA
AT	KESSELWAND F.	507	20161001	20170930	Mär 16	46.8363	10.8011	3031	-2848	BA
AT	VERNAGT F.	489	20150930	20160930	1010	46.87794	10.79494	3470	321	BA
AT	VERNAGT F.	489	20150930	20160930	1040	46.88286	10.84255	3279	52	BA
AT	VERNAGT F.	489	20150930	20160930	1030	46.88732	10.83215	3252	193	BA
AT	VERNAGT F.	489	20150930	20160930	168	46.87318	10.79326	3236	-1424	BA
AT	VERNAGT F.	489	20150930	20160930	281	46.88179	10.81158	3158	-872	BA
AT	VERNAGT F.	489	20150930	20160930	1020	46.8849	10.82418	3146	-639	BA
AT	VERNAGT F.	489	20150930	20160930	280	46.88077	10.81259	3135	-910	BA
AT	VERNAGT F.	489	20150930	20160930	288	46.88166	10.83092	3123	-688	BA
AT	VERNAGT F.	489	20150930	20160930	283	46.87805	10.8102	3103	-1375	BA
AT	VERNAGT F.	489	20150930	20160930	278	46.87255	10.83619	3075	-1627	BA
AT	VERNAGT F.	489	20150930	20160930	273	46.88055	10.81975	3070	-1220	BA
AT	VERNAGT F.	489	20150930	20160930	285	46.87869	10.8243	3036	-1482	BA
AT	VERNAGT F.	489	20150930	20160930	274	46.87423	10.83298	3035	-1743	BA
AT	VERNAGT F.	489	20150930	20160930	275	46.87491	10.81336	3011	-2005	BA
AT	VERNAGT F.	489	20150930	20160930	170	46.86445	10.80643	3007	-1346	BA
AT	VERNAGT F.	489	20150930	20160930	272	46.87458	10.82795	2975	-2063	BA
AT	VERNAGT F.	489	20150930	20160930	169	46.86556	10.80839	2970	-1811	BA
AT	VERNAGT F.	489	20150930	20160930	282	46.87442	10.81599	2968	-2596	BA
AT	VERNAGT F.	489	20150930	20160930	266	46.87456	10.82294	2967	-2189	BA
AT	VERNAGT F.	489	20150930	20160930	265	46.87311	10.82912	2966	-2353	BA
AT	VERNAGT F.	489	20150930	20160930	258	46.87298	10.82642	2956	-2353	BA
AT	VERNAGT F.	489	20150930	20160930	254	46.87286	10.82252	2938	-2741	BA
AT	VERNAGT F.	489	20150930	20160930	251	46.87173	10.82747	2937	-2944	BA
AT	VERNAGT F.	489	20150930	20160930	257	46.87185	10.82426	2928	-2721	BA
AT	VERNAGT F.	489	20150930	20160930	163	46.87127	10.79786	3167	-1443	BA
AT	VERNAGT F.	489	20150930	20160930	165	46.86958	10.79919	3129	-1511	BA
AT	VERNAGT F.	489	20150930	20160930	161	46.86697	10.80018	3085	-1123	BA
AT	VERNAGT F.	489	20150930	20160930	167	46.86425	10.80394	3045	-1085	BA
AT	VERNAGT F.	489	20150930	20160930	160	46.86651	10.80421	3027	-1288	BA
AT	VERNAGT F.	489	20150930	20160930	164	46.86477	10.80914	2974	-1685	BA
AT	VERNAGT F.	489	20150930	20160930	158	46.86753	10.80795	2935	-1995	BA
AT	VERNAGT F.	489	20150930	20160930	159	46.86407	10.81205	2931	-1879	BA
AT	VERNAGT F.	489	20150930	20160930	157	46.86628	10.81115	2915	-2286	BA
AT	VERNAGT F.	489	20150930	20160930	156	46.86741	10.8106	2903	-2557	BA
AT	VERNAGT F.	489	20150930	20160930	142	46.86699	10.81259	2879	-2973	BA
AT	WURTEN K.	545	20150930	20160915	9	47.03812	13.00852	2641	-1485	BA
AT	WURTEN K.	545	20150930	20160915	11	47.03765	13.00827	2636	-1530	BA
AT	WURTEN K.	545	20150930	20160915	12	47.03808	13.00657	2612	-1710	BA
AT	WURTEN K.	545	20150930	20160915	7	47.03963	13.00506	2610	-2313	BA
AT	WURTEN K.	545	20150930	20160915	5	47.0372	13.00515	2583	-2664	BA
AT	WURTEN K.	545	20150930	20160915	6	47.0386	13.00412	2575	-2574	BA
AT	WURTEN K.	545	20150930	20160915	3	47.03719	13.0042	2568	-1746	BA
AT	WURTEN K.	545	20150930	20160915	2	47.03795	13.0035	2555	-2628	BA
AT	WURTEN K.	545	20150930	20160915	1	47.03755	13.00297	2541	-2682	BA
AT	WURTEN K.	545	20160915	20171019	9	47.03812	13.0085	2641	-1719	BA
AT	WURTEN K.	545	20160915	20171019	11	47.03765	13.0083	2636	-2088	BA
AT	WURTEN K.	545	20160915	20171019	12	47.03808	13.0066	2612	-2376	BA
AT	WURTEN K.	545	20160915	20171019	7	47.03963	13.0051	2610	-2718	BA
AT	WURTEN K.	545	20160915	20171019	5	47.0372	13.0052	2583	-2790	BA
AT	WURTEN K.	545	20160915	20171019	6	47.0386	13.0041	2575	-3843	BA
AT	WURTEN K.	545	20160915	20171019	3	47.03719	13.0042	2568	-3501	BA
AT	WURTEN K.	545	20160915	20171019	2	47.03795	13.0035	2555	-4023	BA
AT	WURTEN K.	545	20160915	20171019	1	47.03755	13.003	2541	-4140	BA
BO - Bolivia										
BO	CHARQUINI SUR	2667	20150904	20160905	Pit 1	-16.30092	-68.10322	5312	65	BA
BO	CHARQUINI SUR	2667	20150904	20160905	Pit 2	-16.30064	-68.10389	5291	138	BA
BO	CHARQUINI SUR	2667	20150904	20160905	1L = IIIB	-16.30273	-68.104	5220	-2483	BA
BO	CHARQUINI SUR	2667	20150904	20160905	2J	-16.30269	-68.10458	5203	-2443	BA
BO	CHARQUINI SUR	2667	20150904	20160905	2K	-16.30297	-68.10587	5160	-2894	BA
BO	CHARQUINI SUR	2667	20150904	20160905	10 2015	-16.30264	-68.10759	5107	-2916	BA
BO	CHARQUINI SUR	2667	20160905	20170831	Pit1	-16.30092	-68.10322	5312	760	BA
BO	CHARQUINI SUR	2667	20160905	20170831	5F	-16.30235	-68.1044	5304	-846	BA
BO	CHARQUINI SUR	2667	20160905	20170831	Pit2	-16.30064	-68.10389	5291	914	BA
BO	CHARQUINI SUR	2667	20160905	20170831	Pit3	-16.30201	-68.10389	5244	811	BA
BO	CHARQUINI SUR	2667	20160905	20170831	Mär 15	-16.30266	-68.1038	5228	-787	BA
BO	CHARQUINI SUR	2667	20160905	20170831	Mai 16	-16.30111	-68.10478	5224	-800	BA
BO	CHARQUINI SUR	2667	20160905	20170831	7K	-16.30203	-68.10483	5213	-1041	BA
BO	CHARQUINI SUR	2667	20160905	20170831	Aug 16	-16.30055	-68.10736	5199	-889	BA
BO	CHARQUINI SUR	2667	20160905	20170831	Feb 15	-16.30306	-68.10449	5196	-2051	BA
BO	CHARQUINI SUR	2667	20160905	20170831	8K	-16.30209	-68.10601	5182	-825	BA
BO	CHARQUINI SUR	2667	20160905	20170831	9K1	-16.30143	-68.10691	5158	-1639	BA
BO	CHARQUINI SUR	2667	20160905	20170831	Sep 15	-16.30291	-68.10575	5139	-1241	BA
BO	CHARQUINI SUR	2667	20160905	20170831	Sep 16	-16.30292	-68.10666	5128	-1661	BA
BO	CHARQUINI SUR	2667	20160905	20170831	Okt 16	-16.3025	-68.10733	5119	-1585	BA
BO	CHARQUINI SUR	2667	20160905	20170831	Okt 15	-16.30264	-68.10759	5107	-1747	BA

PU	GLACIER_NAME	WGMS_ID	FROM	TO	POINT_ID	LAT	LON	ELEV	MB	MB_CODE
BO	CHARQUINI SUR	2667	20160905	20170831	Nov 16	-16.30291	-68.1077	5097	-2310	BA
BO	ZONGO	1503	20150903	20160830	PIT1	-16.26674	-68.15096	5791	702	BA
BO	ZONGO	1503	20150903	20160830	PIT2	-16.26933	-68.14885	5628	657	BA
BO	ZONGO	1503	20150903	20160830	PIT3	-16.26668	-68.14751	5623	662	BA
BO	ZONGO	1503	20150903	20160830	XII 2015	-16.27821	-68.14391	5144	-3294	BA
BO	ZONGO	1503	20150903	20160830	22W	-16.27846	-68.14371	5135	-3339	BA
BO	ZONGO	1503	20150903	20160830	4U	-16.2787	-68.14262	5113	-3393	BA
BO	ZONGO	1503	20150903	20160830	XV 2015	-16.27979	-68.14208	5098	-4581	BA
BO	ZONGO	1503	20150903	20160830	XVII 2015	-16.27958	-68.14038	5073	-5490	BA
BO	ZONGO	1503	20150903	20160830	XVIII 2015	-16.2787	-68.13916	5068	-5517	BA
BO	ZONGO	1503	20150903	20160830	XXIII 2015	-16.27962	-68.13649	4985	-9369	BA
BO	ZONGO	1503	20150903	20160830	XXIV 2015	-16.27922	-68.13568	4957	-8883	BA
BO	ZONGO	1503	20150903	20160830	XXV 2015	-16.27925	-68.13487	4932	-10323	BA
BO	ZONGO	1503	20160830	20170901	PIT_0	-16.2647	-68.14691	5710	1265	BA
BO	ZONGO	1503	20160830	20170901	PIT_2	-16.26605	-68.14736	5636	1011	BA
BO	ZONGO	1503	20160830	20170901	PIT_3	-16.2681	-68.14591	5560	992	BA
BO	ZONGO	1503	20160830	20170901	X7-2016	-16.27613	-68.14665	5265	-1271	BA
BO	ZONGO	1503	20160830	20170901	X6 bas	-16.27694	-68.1462	5205	-1151	BA
BO	ZONGO	1503	20160830	20170901	X5	-16.27709	-68.1461	5197	-820	BA
BO	ZONGO	1503	20160830	20170901	16W	-16.27855	-68.14618	5185	-1987	BA
BO	ZONGO	1503	20160830	20170901	17T	-16.2787	-68.1454	5178	-1439	BA
BO	ZONGO	1503	20160830	20170901	Okt 15	-16.27888	-68.14538	5178	-2736	BA
BO	ZONGO	1503	20160830	20170901	Aug 15	-16.27754	-68.14494	5168	-3024	BA
BO	ZONGO	1503	20160830	20170901	Sep 15	-16.27794	-68.14474	5165	-2619	BA
BO	ZONGO	1503	20160830	20170901	Dez 15	-16.27832	-68.14379	5134	-2148	BA
BO	ZONGO	1503	20160830	20170901	1N	-16.2788	-68.1434	5117	-1774	BA
BO	ZONGO	1503	20160830	20170901	13-2015	-16.27853	-68.14276	5111	-1755	BA
BO	ZONGO	1503	20160830	20170901	4U	-16.27891	-68.14233	5100	-2306	BA
BO	ZONGO	1503	20160830	20170901	Nov 15	-16.27992	-68.14342	5100	-2268	BA
BO	ZONGO	1503	20160830	20170901	14-2015	-16.27959	-68.14235	5096	-2565	BA
BO	ZONGO	1503	20160830	20170901	15-2015	-16.27985	-68.14196	5090	-2448	BA
BO	ZONGO	1503	20160830	20170901	17-2015	-16.27961	-68.14025	5065	-3321	BA
BO	ZONGO	1503	20160830	20170901	18-2016	-16.27863	-68.13955	5064	-2763	BA
BO	ZONGO	1503	20160830	20170901	21-2016	-16.28075	-68.13842	5034	-5148	BA
BO	ZONGO	1503	20160830	20170901	22-2016	-16.2802	-68.13743	5007	-6714	BA
BO	ZONGO	1503	20160830	20170901	23-2016	-16.27951	-68.13671	4981	-5850	BA
BO	ZONGO	1503	20160830	20170901	24-2016	-16.27922	-68.1356	4947	-8109	BA
BO	ZONGO	1503	20160830	20170901	25-2016	-16.27926	-68.13504	4929	-9081	BA
CA - Canada										
CA	WHITE	0	20160427	20170424	JGC1	79.53772	-90.99007	1518	171	BA
CA	WHITE	0	20160427	20170424	CJA1	79.53381	-91.02779	1480	207	BA
CA	WHITE	0	20160427	20170424	LP2	79.53215	-91.01885	1458	197	BA
CA	WHITE	0	20160427	20170424	WPA1	79.5361	-90.93173	1450	225	BA
CA	WHITE	0	20160427	20170424	WPA2	79.53273	-90.93559	1418	152	BA
CA	WHITE	0	20160427	20170424	DCP1	79.52983	-90.99868	1414	248	BA
CA	WHITE	0	20160427	20170424	LP4	79.52731	-90.97903	1366	135	BA
CA	WHITE	0	20160427	20170424	WPA3	79.52872	-90.9453	1346	136	BA
CA	WHITE	0	20160427	20170424	EXTRA	79.5255	-90.9683	1317	224	BA
CA	WHITE	0	20160427	20170424	JGC2	79.52303	-90.95615	1291	197	BA
CA	WHITE	0	20160427	20170424	WPA4	79.52188	-90.9463	1265	229	BA
CA	WHITE	0	20160427	20170424	WPA5	79.5189	-90.96	1260	116	BA
CA	WHITE	0	20160427	20170424	L1	79.51957	-90.92682	1238	152	BA
CA	WHITE	0	20160427	20170424	BLUE2	79.51237	-90.88177	1170	27	BA
CA	WHITE	0	20160427	20170424	QMARK	79.51667	-90.89902	1160	241	BA
CA	WHITE	0	20160427	20170424	L18	79.49747	-90.82359	901	-554	BA
CA	WHITE	0	20160427	20170424	L19	79.49522	-90.8159	870	-729	BA
CA	WHITE	0	20160427	20170424	L20	79.4879	-90.78927	861	-765	BA
CA	WHITE	0	20160427	20170424	WG9A	79.4879	-90.78927	741	-817	BA
CA	WHITE	0	20160427	20170424	LP5	79.33378	-90.77947	702	-917	BA
CA	WHITE	0	20160427	20170424	WG8	79.47998	-90.7713	670	-954	BA
CA	WHITE	0	20160427	20170424	CWGEx	79.47325	-90.74692	612	-1035	BA
CA	WHITE	0	20160427	20170424	CWGS	79.47258	-90.75915	609	-1125	BA
CA	WHITE	0	20160427	20170424	WG7	79.46941	-90.75465	586	-1098	BA
CA	WHITE	0	20160427	20170424	LP6	79.46635	-90.73553	550	-1233	BA
CA	WHITE	0	20160427	20170424	LP8	79.45859	-90.71623	472	-1525	BA
CA	WHITE	0	20160427	20170424	WG6	79.45384	-90.70364	394	-1697	BA
CA	WHITE	0	20160427	20170424	LP9	79.45065	-90.69348	379	-1472	BA
CA	WHITE	0	20160427	20170424	ST6	79.44562	-90.67038	293	-1890	BA
CA	WHITE	0	20160427	20170424	ST4	79.44127	-90.64823	248	-1737	BA
CA	WHITE	0	20160427	20170424	WG4	79.43665	-90.64923	194	-1872	BA
CA	WHITE	0	20160427	20170424	WG5	79.43985	-90.62795	187	-2007	BA
CA	WHITE	0	20160427	20170424	ST2	79.43578	-90.63893	176	-1899	BA
CA	WHITE	0	20160427	20170424	LP10	79.43565	-90.62825	176	-2218	BA
CA	WHITE	0	20160427	20170424	WG3	79.43487	-90.65815	149	-2268	BA
CA	WHITE	0	20160427	20170424	WG1A	79.43268	-90.64858	116	-3042	BA
CA	WHITE	0	20161001	20170930	JGC1	79.53772	-90.99007	1518	345	BA
CA	WHITE	0	20161001	20170930	CJA1	79.53382	-91.02778	1480	347	BA
CA	WHITE	0	20161001	20170930	LP2	79.53215	-91.01885	1454	371	BA
CA	WHITE	0	20161001	20170930	WPA1	79.5361	-90.93173	1443	267	BA
CA	WHITE	0	20161001	20170930	WPA2	79.53273	-90.93558	1418	360	BA
CA	WHITE	0	20161001	20170930	DCP1	79.52983	-90.99868	1414	422	BA
CA	WHITE	0	20161001	20170930	LP4	79.52732	-90.97903	1366	415	BA
CA	WHITE	0	20161001	20170930	WPA3	79.52873	-90.94529	1346	326	BA
CA	WHITE	0	20161001	20170930	EXTRA	79.5255	-90.9683	1317	564	BA
CA	WHITE	0	20161001	20170930	WPA4	79.52188	-90.9463	1265	352	BA
CA	WHITE	0	20161001	20170930	WPA5	79.5189	-90.96	1255	318	BA
CA	WHITE	0	20161001	20170930	L1	79.51957	-90.92682	1238	371	BA
CA	WHITE	0	20161001	20170930	QMARK	79.51667	-90.89902	1160	247	BA
CA	WHITE	0	20161001	20170930	BLUE2	79.51237	-90.88177	1074	399	BA
CA	WHITE	0	20161001	20170930	L17	79.49953	-90.83287	944	257	BA
CA	WHITE	0	20161001	20170930	L18	79.49747	-90.82358	901	261	BA
CA	WHITE	0	20161001	20170930	L19	79.49522	-90.8159	874	27	BA
CA	WHITE	0	20161001	20170930	L20	79.4879	-90.78927	865	-41	BA
CA	WHITE	0	20161001	20170930	L21	79.49133	-90.80235	787	-215	BA
CA	WHITE	0	20161001	20170930	WG9A	79.4879	-90.78927	744	-40	BA

PU	GLACIER_NAME	WGMS_ID	FROM	TO	POINT_ID	LAT	LON	ELEV	MB	MB_CODE
CA	WHITE	0	20161001	20170930	LP5	79.33378	-90.77947	702	-216	BA
CA	WHITE	0	20161001	20170930	WG8	79.47998	-90.7713	670	-171	BA
CA	WHITE	0	20161001	20170930	CWGEx	79.47325	-90.74692	612	-378	BA
CA	WHITE	0	20161001	20170930	CWGS	79.47258	-90.75915	609	-189	BA
CA	WHITE	0	20161001	20170930	WG7	79.46942	-90.75465	586	-444	BA
CA	WHITE	0	20161001	20170930	LP6	79.46635	-90.73553	550	-900	BA
CA	WHITE	0	20161001	20170930	LP8	79.45859	-90.71624	448	-824	BA
CA	WHITE	0	20161001	20170930	WG6	79.45384	-90.70365	387	-979	BA
CA	WHITE	0	20161001	20170930	LP9	79.45065	-90.69348	379	-873	BA
CA	WHITE	0	20161001	20170930	ST6	79.44562	-90.67038	293	-1244	BA
CA	WHITE	0	20161001	20170930	ST4	79.44127	-90.64823	237	-1246	BA
CA	WHITE	0	20161001	20170930	WG4	79.43665	-90.64923	190	-1382	BA
CA	WHITE	0	20161001	20170930	LP10	79.43565	-90.62825	176	-1539	BA
CA	WHITE	0	20161001	20170930	WG5	79.43985	-90.62795	172	-1436	BA
CA	WHITE	0	20161001	20170930	ST2	79.43578	-90.63893	171	-1391	BA
CA	WHITE	0	20161001	20170930	WG3	79.43487	-90.65815	149	-1579	BA
CA	WHITE	0	20161001	20170930	WG1A	79.43268	-90.64858	116	-2291	BA
CH - Switzerland										
CH	ADLER	3801	20150921	20160922	Ag-400	46.01112	7.8655	3239	-1940	BA
CH	ADLER	3801	20150921	20160412	Ag-400	46.01112	7.8655	3239	490	BW
CH	ADLER	3801	20150921	20160412	Ag-200	46.0103	7.85875	3087	670	BW
CH	ADLER	3801	20150921	20160922	Ag-200	46.0103	7.85875	3087	-2380	BA
CH	ADLER	3801	20169999	20170412	Ag-400	46.0111	7.8653	3231	760	BW
CH	ADLER	3801	20160922	20170921	Ag-400	46.0111	7.8653	3231	-2500	BA
CH	ADLER	3801	20160922	20170921	Ag-200	46.0103	7.8585	3075	-3030	BA
CH	ADLER	3801	20169999	20170412	Ag-200	46.0103	7.8585	3075	700	BW
CH	ALLALIN	394	20150921	20160822	15106	46.0308	7.9177	3370	-77	BA
CH	ALLALIN	394	20150921	20160822	15100	46.0398	7.9103	3223	-657	BA
CH	ALLALIN	394	20150921	20160822	15105	46.0482	7.9329	2860	-1440	BA
CH	ALLALIN	394	20150921	20160822	15104	46.0474	7.9333	2842	-1440	BA
CH	ALLALIN	394	20150921	20160821	15102	46.0458	7.9341	2829	-1260	BA
CH	ALLALIN	394	20150921	20160822	15103	46.0466	7.9338	2828	-1440	BA
CH	ALLALIN	394	20150921	20160821	15101	46.0447	7.9347	2826	-1530	BA
CH	ALLALIN	394	20150921	20160822	14102	46.0457	7.9343	2824	-1080	BA
CH	ALLALIN	394	20160822	20170821	106	46.0308	7.9177	3371	-1760	BA
CH	ALLALIN	394	20160822	20170821	100	46.04	7.9106	3221	-2610	BA
CH	ALLALIN	394	20160822	20170821	104	46.0474	7.9335	2840	-3870	BA
CH	ALLALIN	394	20160822	20170821	103	46.0466	7.9339	2829	-3780	BA
CH	ALLALIN	394	20160822	20170821	102	46.0457	7.9343	2828	-3420	BA
CH	ALLALIN	394	20160822	20170821	101	46.0447	7.9348	2827	-3870	BA
CH	BASODINO	463	20150831	20160525	15	46.4154	8.4712	3020	1699	BW
CH	BASODINO	463	20150831	20161004	15	46.4154	8.4712	3020	-510	BA
CH	BASODINO	463	20150831	20160525	8	46.4131	8.4742	3020	2003	BW
CH	BASODINO	463	20150831	20161004	8	46.4131	8.4742	3020	10	BA
CH	BASODINO	463	20150831	20160525	12	46.414	8.4764	2970	1840	BW
CH	BASODINO	463	20150831	20161004	12	46.414	8.4764	2970	-700	BA
CH	BASODINO	463	20150926	20160525	14	46.4158	8.479	2874	1720	BW
CH	BASODINO	463	20150926	20161004	14	46.4158	8.479	2874	-1450	BA
CH	BASODINO	463	20150926	20160525	16	46.4195	8.4749	2848	1711	BW
CH	BASODINO	463	20150926	20161004	16	46.4195	8.4749	2848	-1170	BA
CH	BASODINO	463	20150926	20160525	2	46.4183	8.4801	2792	1570	BW
CH	BASODINO	463	20150926	20161004	2	46.4183	8.4801	2792	-1611	BA
CH	BASODINO	463	20150926	20160525	9	46.4169	8.4865	2738	1720	BW
CH	BASODINO	463	20150926	20161004	9	46.4169	8.4865	2738	-1827	BA
CH	BASODINO	463	20150926	20160525	10	46.4166	8.4921	2680	1849	BW
CH	BASODINO	463	20150926	20161004	10	46.4166	8.4921	2680	-2016	BA
CH	BASODINO	463	20150926	20160525	11	46.4156	8.4961	2586	2288	BW
CH	BASODINO	463	20150926	20161004	11	46.4156	8.4961	2586	-1098	BA
CH	BASODINO	463	20169999	20170509	8	46.4131	8.4742	3037	1558	BW
CH	BASODINO	463	20169999	20170509	15	46.4154	8.4712	3036	1402	BW
CH	BASODINO	463	20161004	20170908	15	46.4154	8.4713	3035	-850	BA
CH	BASODINO	463	20161004	20170908	8	46.4132	8.4742	3026	-600	BA
CH	BASODINO	463	20169999	20170509	12	46.4141	8.4764	2985	1607	BW
CH	BASODINO	463	20161004	20170908	12	46.4141	8.4764	2979	-704	BA
CH	BASODINO	463	20169999	20170509	14	46.4158	8.479	2898	1439	BW
CH	BASODINO	463	20161004	20170908	14	46.4158	8.479	2886	-1148	BA
CH	BASODINO	463	20161004	20170908	7	46.4189	8.4746	2882	-1773	BA
CH	BASODINO	463	20169999	20170509	6	46.4197	8.4747	2865	1287	BW
CH	BASODINO	463	20169999	20170509	4	46.4182	8.48	2808	1333	BW
CH	BASODINO	463	20161004	20170908	4	46.4182	8.4799	2794	-1359	BA
CH	BASODINO	463	20161004	20170908	9	46.4169	8.4864	2748	-1377	BA
CH	BASODINO	463	20169999	20170509	9	46.4169	8.4864	2738	1587	BW
CH	BASODINO	463	20161004	20170908	10	46.4165	8.4921	2686	-1521	BA
CH	BASODINO	463	20169999	20170509	10	46.4166	8.4921	2680	1845	BW
CH	BASODINO	463	20169999	20170509	11	46.4156	8.496	2631	2399	BW
CH	BASODINO	463	20161004	20170908	11	46.4156	8.496	2631	-2025	BA
CH	CLARIDENFIRN	2660	20151009	20160930	14oP	46.8441	8.8887	2890	655	BA
CH	CLARIDENFIRN	2660	20151009	20160528	14oP	46.8441	8.8887	2890	2148	BW
CH	CLARIDENFIRN	2660	20151009	20160527	15uP	46.8552	8.9106	2670	2054	BW
CH	CLARIDENFIRN	2660	20151009	20160930	15uP	46.8552	8.9106	2670	-357	BA
CH	CLARIDENFIRN	2660	20160930	20170525	16oP	46.8441	8.8886	2890	1944	BW
CH	CLARIDENFIRN	2660	20160930	20170923	16oP	46.8441	8.8886	2890	178	BA
CH	CLARIDENFIRN	2660	20160930	20170923	16uP	46.8553	8.9108	2670	-1133	BA
CH	CLARIDENFIRN	2660	20160930	20170525	16uP	46.8553	8.9108	2670	1695	BW
CH	CORBASSIERE	366	20150908	20160913	15625	45.9886	7.2997	2633	-3105	BA
CH	CORBASSIERE	366	20150908	20160913	15623	45.9894	7.3017	2629	-3402	BA
CH	CORBASSIERE	366	20150908	20160913	15621	45.9903	7.3041	2625	-3060	BA
CH	CORBASSIERE	366	20150908	20160913	15670	45.9943	7.2986	2589	-3690	BA
CH	CORBASSIERE	366	20150909	20160914	15725	45.9994	7.2876	2427	-3159	BA
CH	CORBASSIERE	366	20150909	20160914	15722	46	7.2909	2424	-4797	BA
CH	CORBASSIERE	366	20150909	20160914	15723	45.9997	7.2896	2410	-3618	BA
CH	CORBASSIERE	366	20160913	20170921	16625	45.9886	7.2996	2631	-4293	BA
CH	CORBASSIERE	366	20160913	20170921	16623	45.9894	7.3017	2626	-4194	BA
CH	CORBASSIERE	366	20160913	20170921	16621	45.9903	7.3041	2623	-4266	BA
CH	CORBASSIERE	366	20160913	20170921	16670	45.9943	7.2986	2587	-5391	BA

PU	GLACIER_NAME	WGMS_ID	FROM	TO	POINT_ID	LAT	LON	ELEV	MB	MB_CODE
CH	CORBASSIERE	366	20160914	20170922	16725	45.9994	7.2878	2424	-3177	BA
CH	CORBASSIERE	366	20160914	20170922	16721	46.0003	7.2921	2423	-6012	BA
CH	CORBASSIERE	366	20160914	20170922	16723	45.9998	7.2895	2403	-5166	BA
CH	CORVATSCH SOUTH	4535	20150919	20160410	212	46.41535	9.8216	3322	660	BW
CH	CORVATSCH SOUTH	4535	20150919	20160925	212	46.41535	9.8216	3322	-550	BA
CH	CORVATSCH SOUTH	4535	20150919	20160925	412	46.41746	9.82389	3258	-1550	BA
CH	CORVATSCH SOUTH	4535	20150919	20160410	412	46.41746	9.82389	3258	500	BW
CH	CORVATSCH SOUTH	4535	20150919	20160925	612	46.41959	9.82561	3210	-880	BA
CH	CORVATSCH SOUTH	4535	20150919	20160410	612	46.41959	9.82561	3210	520	BW
CH	CORVATSCH SOUTH	4535	20150919	20160410	812	46.42015	9.8276	3156	520	BW
CH	CORVATSCH SOUTH	4535	20150919	20160925	812	46.42015	9.8276	3156	-990	BA
CH	CORVATSCH SOUTH	4535	20150919	20160410	912	46.42114	9.82837	3100	570	BW
CH	CORVATSCH SOUTH	4535	20150919	20160925	912	46.42114	9.82837	3100	-1000	BA
CH	CORVATSCH SOUTH	4535	20160925	20170913	212	46.4154	9.8216	3322	-1840	BA
CH	CORVATSCH SOUTH	4535	20169999	20170424	212	46.4154	9.8216	3322	390	BW
CH	CORVATSCH SOUTH	4535	20169999	20170424	1013	46.4141	9.8225	3297	470	BW
CH	CORVATSCH SOUTH	4535	20160925	20170913	1013	46.4141	9.8225	3297	-1670	BA
CH	CORVATSCH SOUTH	4535	20169999	20170424	112	46.416	9.8217	3289	190	BW
CH	CORVATSCH SOUTH	4535	20160925	20170913	112	46.416	9.8217	3289	-1390	BA
CH	CORVATSCH SOUTH	4535	20169999	20170424	416	46.4175	9.8239	3259	190	BW
CH	CORVATSCH SOUTH	4535	20160925	20170913	416	46.4175	9.8239	3259	-2460	BA
CH	FINDELEN	389	20150921	20160412	Fi-1020	45.98129	7.88126	3471	1510	BW
CH	FINDELEN	389	20150921	20160922	Fi-1020	45.98129	7.88126	3471	380	BA
CH	FINDELEN	389	20150921	20160922	Fi-1010	45.99591	7.8916	3345	100	BA
CH	FINDELEN	389	20150921	20160412	Fi-1010	45.99591	7.8916	3345	1020	BW
CH	FINDELEN	389	20150921	20160922	Fi-940	45.98821	7.87286	3263	-1360	BA
CH	FINDELEN	389	20150921	20160412	Fi-940	45.98821	7.87286	3263	840	BW
CH	FINDELEN	389	20150921	20160412	Fi-910	45.99977	7.88131	3255	870	BW
CH	FINDELEN	389	20150921	20160922	Fi-910	45.99977	7.88131	3255	-790	BA
CH	FINDELEN	389	20150921	20160412	Fi-810	46.00146	7.8682	3138	790	BW
CH	FINDELEN	389	20150921	20160922	Fi-810	46.00146	7.8682	3138	-1860	BA
CH	FINDELEN	389	20150921	20160922	Fi-800	45.99549	7.86842	3121	-1270	BA
CH	FINDELEN	389	20150921	20160412	Fi-800	45.99549	7.86842	3121	820	BW
CH	FINDELEN	389	20150921	20160412	Fi-820	45.99487	7.85834	3086	620	BW
CH	FINDELEN	389	20150921	20160922	Fi-820	45.99487	7.85834	3086	-1700	BA
CH	FINDELEN	389	20150921	20160922	Fi-700	46.00006	7.85858	3036	-2220	BA
CH	FINDELEN	389	20150921	20160412	Fi-700	46.00006	7.85858	3036	790	BW
CH	FINDELEN	389	20150921	20160412	Fi-610	46.00551	7.85708	2967	640	BW
CH	FINDELEN	389	20150921	20160922	Fi-610	46.00551	7.85708	2967	-3140	BA
CH	FINDELEN	389	20150921	20160412	Fi-500	46.00563	7.85406	2933	720	BW
CH	FINDELEN	389	20150921	20160922	Fi-500	46.00563	7.85406	2933	-2700	BA
CH	FINDELEN	389	20150921	20160412	Fi-400	46.00922	7.84564	2805	460	BW
CH	FINDELEN	389	20150921	20160922	Fi-400	46.00922	7.84564	2805	-4800	BA
CH	FINDELEN	389	20150921	20160412	Fi-320	46.0083	7.83897	2708	610	BW
CH	FINDELEN	389	20150921	20160922	Fi-320	46.0083	7.83897	2708	-5060	BA
CH	FINDELEN	389	20150921	20160412	Fi-310	46.00959	7.83767	2694	170	BW
CH	FINDELEN	389	20150921	20160922	Fi-310	46.00959	7.83767	2694	-5310	BA
CH	FINDELEN	389	20150921	20160412	Fi-200	46.01006	7.83021	2622	300	BW
CH	FINDELEN	389	20150921	20160922	Fi-200	46.01006	7.83021	2622	-7180	BA
CH	FINDELEN	389	20160922	20170921	Fi-1020	45.9814	7.8811	3472	0	BA
CH	FINDELEN	389	20169999	20170412	Fi-1020	45.9814	7.8811	3472	980	BW
CH	FINDELEN	389	20169999	20170412	Fi-1010	45.9963	7.8908	3338	1200	BW
CH	FINDELEN	389	20160922	20170921	Fi-1010	45.9963	7.8908	3338	-120	BA
CH	FINDELEN	389	20169999	20170412	Fi-940	45.9888	7.8722	3250	720	BW
CH	FINDELEN	389	20160922	20170921	Fi-940	45.9888	7.8722	3250	-1570	BA
CH	FINDELEN	389	20160922	20170921	Fi-810	46.0016	7.869	3149	-2890	BA
CH	FINDELEN	389	20169999	20170412	Fi-810	46.0016	7.869	3149	510	BW
CH	FINDELEN	389	20160922	20170921	Fi-800	45.9954	7.8686	3122	-1610	BA
CH	FINDELEN	389	20169999	20170412	Fi-800	45.9954	7.8686	3122	860	BW
CH	FINDELEN	389	20160922	20170921	Fi-820	45.9946	7.8587	3088	-2540	BA
CH	FINDELEN	389	20169999	20170412	Fi-820	45.9946	7.8587	3088	860	BW
CH	FINDELEN	389	20160922	20170921	Fi-700	46.0006	7.8578	3031	-3170	BA
CH	FINDELEN	389	20169999	20170412	Fi-700	46.0006	7.8578	3031	780	BW
CH	FINDELEN	389	20169999	20170412	Fi-610	46.0059	7.8563	2947	580	BW
CH	FINDELEN	389	20160922	20170921	Fi-610	46.0059	7.8563	2947	-3860	BA
CH	FINDELEN	389	20169999	20170412	Fi-500	46.0059	7.8538	2921	960	BW
CH	FINDELEN	389	20160922	20170921	Fi-500	46.0059	7.8538	2921	-3060	BA
CH	FINDELEN	389	20169999	20170412	Fi-400	46.0092	7.8454	2790	480	BW
CH	FINDELEN	389	20160922	20170921	Fi-400	46.0092	7.8454	2790	-4950	BA
CH	FINDELEN	389	20169999	20170412	Fi-310	46.0095	7.838	2679	90	BW
CH	FINDELEN	389	20160922	20170921	Fi-310	46.0095	7.838	2679	-5920	BA
CH	FINDELEN	389	20160922	20170921	Fi-200	46.0099	7.8313	2602	-7070	BA
CH	FINDELEN	389	20169999	20170412	Fi-200	46.0099	7.8313	2602	480	BW
CH	GIETRO	367	20150908	20160913	1501	45.9827	7.3889	3300	325	BA
CH	GIETRO	367	20150908	20160913	1502	45.9871	7.3948	3248	187	BA
CH	GIETRO	367	20150908	20160913	1404	45.9922	7.3896	3186	-247	BA
CH	GIETRO	367	20150908	20160913	1505	45.999	7.3822	3053	-1350	BA
CH	GIETRO	367	20150908	20160913	15107	46.0023	7.3725	2928	-3789	BA
CH	GIETRO	367	20150908	20160913	15101	46.0023	7.3707	2871	-2790	BA
CH	GIETRO	367	20150908	20160913	15102	46.0021	7.3692	2816	-3186	BA
CH	GIETRO	367	20150908	20160913	15103	46.0018	7.3685	2798	-5706	BA
CH	GIETRO	367	20160913	20170921	1501	45.9827	7.3889	3300	-1573	BA
CH	GIETRO	367	20160913	20170921	1602	45.9871	7.3948	3248	-1488	BA
CH	GIETRO	367	20160913	20170921	1604	45.9921	7.3897	3186	-1962	BA
CH	GIETRO	367	20160913	20170921	1605	45.999	7.3822	3053	-2898	BA
CH	GIETRO	367	20160913	20170921	16107	46.0024	7.3722	2918	-3636	BA
CH	GIETRO	367	20160913	20170921	16102	46.0022	7.3693	2821	-5112	BA
CH	GIETRO	367	20160913	20170921	16103	46.0016	7.3674	2765	-4581	BA
CH	GRIES	359	20150908	20160907	111	46.4333	8.3164	3034	-850	BA
CH	GRIES	359	20159999	20160429	111	46.4333	8.3164	3034	1730	BW
CH	GRIES	359	20150908	20160907	113	46.4309	8.3183	3031	-280	BA
CH	GRIES	359	20159999	20160429	113	46.4309	8.3183	3031	1930	BW
CH	GRIES	359	20150908	20160907	112	46.432	8.3174	3027	-1030	BA
CH	GRIES	359	20159999	20160429	112	46.432	8.3174	3027	1750	BW
CH	GRIES	359	20159999	20160429	101	46.4353	8.3223	2992	1760	BW
CH	GRIES	359	20150908	20160907	101	46.4353	8.3223	2992	-680	BA

PU	GLACIER_NAME	WGMS_ID	FROM	TO	POINT_ID	LAT	LON	ELEV	MB	MB_CODE
CH	GRIES	359	20159999	20160429	102	46.4342	8.3245	2989	1660	BW
CH	GRIES	359	20150908	20160907	102	46.4342	8.3245	2989	-630	BA
CH	GRIES	359	20159999	20160429	91	46.4374	8.3279	2938	1480	BW
CH	GRIES	359	20150908	20160907	91	46.4374	8.3279	2938	-1310	BA
CH	GRIES	359	20150908	20160907	92	46.436	8.3288	2937	-1280	BA
CH	GRIES	359	20159999	20160429	92	46.436	8.3288	2937	1750	BW
CH	GRIES	359	20159999	20160429	81	46.4385	8.3336	2888	1540	BW
CH	GRIES	359	20150908	20160907	81	46.4385	8.3336	2888	-1490	BA
CH	GRIES	359	20159999	20160429	82	46.4373	8.3359	2877	1840	BW
CH	GRIES	359	20150908	20160907	82	46.4373	8.3359	2877	-940	BA
CH	GRIES	359	20159999	20160429	71	46.4397	8.3414	2773	1860	BW
CH	GRIES	359	20150908	20160907	71	46.4397	8.3414	2773	-830	BA
CH	GRIES	359	20159999	20160429	61	46.4427	8.3412	2674	1380	BW
CH	GRIES	359	20150908	20160907	61	46.4427	8.3412	2674	-2540	BA
CH	GRIES	359	20159999	20160429	51	46.4452	8.3399	2611	1450	BW
CH	GRIES	359	20150908	20160907	51	46.4452	8.3399	2611	-2870	BA
CH	GRIES	359	20150908	20160907	52	46.445	8.3413	2606	-2690	BA
CH	GRIES	359	20159999	20160429	52	46.445	8.3413	2606	1670	BW
CH	GRIES	359	20159999	20160429	41	46.4483	8.3443	2563	1200	BW
CH	GRIES	359	20150908	20160907	42	46.4483	8.3443	2563	-3610	BA
CH	GRIES	359	20150908	20160907	41	46.4483	8.3443	2563	-3080	BA
CH	GRIES	359	20159999	20160429	42	46.4483	8.3443	2563	1200	BW
CH	GRIES	359	20159999	20160429	31	46.4508	8.3495	2537	1100	BW
CH	GRIES	359	20150908	20160907	31	46.4508	8.3495	2537	-3400	BA
CH	GRIES	359	20159999	20160429	32	46.4497	8.3503	2531	1240	BW
CH	GRIES	359	20150908	20160907	32	46.4497	8.3503	2531	-3650	BA
CH	GRIES	359	20159999	20160429	21	46.4524	8.353	2508	1450	BW
CH	GRIES	359	20150908	20160907	21	46.4524	8.353	2508	-3720	BA
CH	GRIES	359	20150908	20160907	22	46.4507	8.3532	2506	-3440	BA
CH	GRIES	359	20159999	20160429	22	46.4507	8.3532	2506	1440	BW
CH	GRIES	359	20160907	20170907	111	46.4333	8.3164	3031	-2070	BA
CH	GRIES	359	20169999	20170505	111	46.4333	8.3164	3031	1720	BW
CH	GRIES	359	20169999	20170505	113	46.4309	8.3183	3029	1740	BW
CH	GRIES	359	20160907	20170907	113	46.4309	8.3183	3029	-1400	BA
CH	GRIES	359	20160907	20170907	112	46.432	8.3174	3025	-1880	BA
CH	GRIES	359	20169999	20170505	112	46.432	8.3174	3025	1720	BW
CH	GRIES	359	20160907	20170907	101	46.4353	8.3223	2989	-2230	BA
CH	GRIES	359	20169999	20170505	101	46.4353	8.3223	2989	1600	BW
CH	GRIES	359	20169999	20170505	91	46.4374	8.3279	2935	1520	BW
CH	GRIES	359	20160907	20170907	91	46.4374	8.3279	2935	-2750	BA
CH	GRIES	359	20160907	20170907	92	46.436	8.3288	2933	-2380	BA
CH	GRIES	359	20169999	20170505	92	46.436	8.3288	2933	1380	BW
CH	GRIES	359	20160907	20170907	81	46.4385	8.3336	2886	-2790	BA
CH	GRIES	359	20169999	20170505	81	46.4385	8.3336	2886	1430	BW
CH	GRIES	359	20169999	20170505	82	46.4373	8.3359	2874	1610	BW
CH	GRIES	359	20160907	20170907	82	46.4373	8.3359	2874	-2180	BA
CH	GRIES	359	20160907	20170907	61	46.4427	8.3412	2666	-3980	BA
CH	GRIES	359	20169999	20170505	61	46.4427	8.3412	2666	1370	BW
CH	GRIES	359	20169999	20170505	51	46.4452	8.3399	2601	1230	BW
CH	GRIES	359	20160907	20170907	51	46.4452	8.3399	2601	-4340	BA
CH	GRIES	359	20160907	20170907	52	46.445	8.3413	2594	-3770	BA
CH	GRIES	359	20169999	20170505	52	46.445	8.3413	2594	920	BW
CH	GRIES	359	20160907	20170907	42	46.4483	8.3443	2551	-4590	BA
CH	GRIES	359	20160907	20170907	41	46.4483	8.3443	2551	-3820	BA
CH	GRIES	359	20169999	20170505	41	46.4483	8.3443	2551	1140	BW
CH	GRIES	359	20169999	20170505	42	46.4483	8.3443	2551	1140	BW
CH	GRIES	359	20160907	20170907	31	46.4508	8.3495	2524	-4070	BA
CH	GRIES	359	20169999	20170505	31	46.4508	8.3495	2524	1080	BW
CH	GRIES	359	20160907	20170907	32	46.4497	8.3503	2518	-4630	BA
CH	GRIES	359	20169999	20170505	32	46.4497	8.3503	2518	1080	BW
CH	GRIES	359	20160907	20170907	21	46.4524	8.353	2493	-5190	BA
CH	GRIES	359	20169999	20170505	21	46.4524	8.353	2493	1330	BW
CH	GRIES	359	20160907	20170907	22	46.4507	8.3532	2489	-5190	BA
CH	GRIES	359	20169999	20170505	22	46.4507	8.3532	2489	1080	BW
CH	HOHLAUB	3332	20150921	20160822	15110	46.0569	7.922	3029	-1530	BA
CH	HOHLAUB	3332	20160822	20170821	110b	46.0568	7.9222	3030	-2700	BA
CH	HOHLAUB	3332	20160822	20170821	110a	46.0568	7.9221	3030	-3060	BA
CH	MORTERATSCH, VADRET DA	1673	20151001	20160930	M61	46.39794	9.92538	2524	-3549	IN
CH	MORTERATSCH, VADRET DA	1673	20151001	20160930	M59	46.3991	9.92612	2503	-4059	IN
CH	MORTERATSCH, VADRET DA	1673	20151001	20160930	M58	46.39995	9.92676	2490	-3504	IN
CH	MORTERATSCH, VADRET DA	1673	20151001	20160930	M51	46.401	9.9309	2454	-4732	IN
CH	MORTERATSCH, VADRET DA	1673	20151001	20160930	M56	46.40415	9.92862	2450	-4304	IN
CH	MORTERATSCH, VADRET DA	1673	20151001	20160930	M54	46.40306	9.93029	2447	-4213	IN
CH	MORTERATSCH, VADRET DA	1673	20151001	20160930	M20	46.4075	9.93025	2425	-4277	IN
CH	MORTERATSCH, VADRET DA	1673	20151001	20160930	M26	46.41051	9.93354	2363	-4559	IN
CH	MORTERATSCH, VADRET DA	1673	20151001	20160930	M62	46.41802	9.93366	2217	-5751	IN
CH	MURTEL VADRET DAL	4339	20150919	20160925	415	46.40734	9.82196	3211	30	BA
CH	MURTEL VADRET DAL	4339	20150919	20160410	415	46.40734	9.82196	3211	780	BW
CH	MURTEL VADRET DAL	4339	20150919	20160925	713	46.40849	9.82277	3196	-410	BA
CH	MURTEL VADRET DAL	4339	20150919	20160410	713	46.40849	9.82277	3196	780	BW
CH	MURTEL VADRET DAL	4339	20150919	20160925	312	46.40878	9.82455	3178	-840	BA
CH	MURTEL VADRET DAL	4339	20150919	20160410	312	46.40878	9.82455	3178	690	BW
CH	MURTEL VADRET DAL	4339	20150919	20160410	215	46.40936	9.82641	3142	640	BW
CH	MURTEL VADRET DAL	4339	20150919	20160925	215	46.40936	9.82641	3142	-950	BA
CH	MURTEL VADRET DAL	4339	20150919	20160410	515	46.41038	9.82701	3119	680	BW
CH	MURTEL VADRET DAL	4339	20150919	20160925	515	46.41038	9.82701	3119	-1340	BA
CH	MURTEL VADRET DAL	4339	20150919	20160925	115	46.4108	9.82821	3100	-1870	BA
CH	MURTEL VADRET DAL	4339	20150919	20160410	115	46.4108	9.82821	3100	570	BW
CH	MURTEL VADRET DAL	4339	20169999	20170424	713	46.4085	9.8227	3196	550	BW
CH	MURTEL VADRET DAL	4339	20160925	20170913	713	46.4085	9.8227	3196	-1310	BA
CH	MURTEL VADRET DAL	4339	20160925	20170913	316	46.4089	9.8246	3175	-1750	BA
CH	MURTEL VADRET DAL	4339	20169999	20170424	316	46.4089	9.8246	3175	370	BW
CH	MURTEL VADRET DAL	4339	20169999	20170424	215	46.4094	9.8264	3143	520	BW
CH	MURTEL VADRET DAL	4339	20160925	20170913	215	46.4094	9.8264	3143	-1970	BA
CH	MURTEL VADRET DAL	4339	20160925	20170913	116	46.4106	9.8283	3101	-3190	BA
CH	MURTEL VADRET DAL	4339	20169999	20170424	116	46.4106	9.8283	3101	240	BW

PU	GLACIER_NAME	WGMS_ID	FROM	TO	POINT_ID	LAT	LON	ELEV	MB	MB_CODE
CH	OBERAAR	451	20150926	20160816	OA2	46.53655	8.22553	2410	-2466	IN
CH	OBERAAR	451	20160816	20160910	OA2	46.53655	8.22553	2410	-1143	IN
CH	OBERAAR	451	20160910	20170702	OA2	46.53655	8.22553	2330	-1953	IN
CH	OBERAAR	451	20170702	20171010	OA2	46.53655	8.22553	2330	-3510	IN
CH	PERS, VADRET	10472	20151001	20160930	P27	46.39728	9.97409	3022	-355	IN
CH	PERS, VADRET	10472	20151001	20160930	P22	46.40057	9.96247	2787	-2421	IN
CH	PERS, VADRET	10472	20151001	20160930	P21	46.40087	9.96579	2776	-2321	IN
CH	PERS, VADRET	10472	20151001	20160930	P33	46.40667	9.95435	2664	-3467	IN
CH	PERS, VADRET	10472	20151001	20160930	P32	46.40803	9.95362	2650	-3340	IN
CH	PERS, VADRET	10472	20151001	20160930	P35	46.41002	9.94845	2600	-4869	IN
CH	PERS, VADRET	10472	20151001	20160930	P37	46.40906	9.9386	2440	-6543	IN
CH	PIZOL	417	20150927	20160328	315	46.95841	9.38782	2769	1630	BW
CH	PIZOL	417	20150927	20160924	315	46.95841	9.38782	2769	-520	BA
CH	PIZOL	417	20150927	20160924	915	46.95876	9.38935	2715	-290	BA
CH	PIZOL	417	20150927	20160328	915	46.95876	9.38935	2715	1420	BW
CH	PIZOL	417	20150927	20160924	615	46.95847	9.39036	2712	-350	BA
CH	PIZOL	417	20150927	20160328	615	46.95847	9.39036	2712	1280	BW
CH	PIZOL	417	20150927	20160328	215	46.95942	9.38893	2697	1440	BW
CH	PIZOL	417	20150927	20160924	215	46.95942	9.38893	2697	-500	BA
CH	PIZOL	417	20150927	20160328	515	46.9603	9.38831	2678	1260	BW
CH	PIZOL	417	20150927	20160924	515	46.9603	9.38831	2678	-420	BA
CH	PIZOL	417	20150927	20160328	815	46.95962	9.39017	2669	1300	BW
CH	PIZOL	417	20150927	20160924	815	46.95962	9.39017	2669	-1280	BA
CH	PIZOL	417	20150927	20160924	415	46.96072	9.38893	2653	-1790	BA
CH	PIZOL	417	20150927	20160328	415	46.96072	9.38893	2653	1360	BW
CH	PIZOL	417	20150927	20160328	114	46.96053	9.39018	2630	1180	BW
CH	PIZOL	417	20150927	20160924	114	46.96053	9.39018	2630	-840	BA
CH	PIZOL	417	20160924	20170929	316	46.9584	9.388	2767	-2180	BA
CH	PIZOL	417	20169999	20170316	316	46.9584	9.388	2767	1220	BW
CH	PIZOL	417	20169999	20170316	915	46.9587	9.3894	2716	1370	BW
CH	PIZOL	417	20160924	20170929	915	46.9587	9.3894	2716	-1100	BA
CH	PIZOL	417	20160924	20170929	617	46.9586	9.3904	2709	-1240	BA
CH	PIZOL	417	20169999	20170316	617	46.9586	9.3904	2709	1170	BW
CH	PIZOL	417	20160924	20170929	217	46.9594	9.3889	2697	-1670	BA
CH	PIZOL	417	20169999	20170316	217	46.9594	9.3889	2697	1040	BW
CH	PIZOL	417	20160924	20170929	517	46.9603	9.3883	2678	-2030	BA
CH	PIZOL	417	20169999	20170316	517	46.9603	9.3883	2678	1110	BW
CH	PIZOL	417	20169999	20170316	117	46.9597	9.3899	2672	970	BW
CH	PIZOL	417	20160924	20170929	117	46.9597	9.3899	2672	-2600	BA
CH	PIZOL	417	20160924	20170929	416	46.9606	9.3888	2661	-2650	BA
CH	PIZOL	417	20169999	20170316	416	46.9606	9.3888	2661	950	BW
CH	PIZOL	417	20169999	20170316	115	46.9605	9.3902	2633	1090	BW
CH	PIZOL	417	20160924	20170929	115	46.9605	9.3902	2633	-1740	BA
CH	PLAINE MORTE	4246	20151023	20161006	plm3-15	46.38038	7.51044	2721	-40	BA
CH	PLAINE MORTE	4246	20151023	20160330	plm3-15	46.38038	7.51044	2721	1570	BW
CH	PLAINE MORTE	4246	20151023	20161006	plm1-15	46.37807	7.48827	2703	-790	BA
CH	PLAINE MORTE	4246	20151023	20160330	plm1-15	46.37807	7.48827	2703	1450	BW
CH	PLAINE MORTE	4246	20151023	20161006	plm6-15	46.38108	7.49605	2691	-700	BA
CH	PLAINE MORTE	4246	20151023	20160330	plm6-15	46.38108	7.49605	2691	1570	BW
CH	PLAINE MORTE	4246	20151023	20160330	plm5-15	46.38625	7.50371	2670	1690	BW
CH	PLAINE MORTE	4246	20151023	20161006	plm5-15	46.38625	7.50371	2670	-690	BA
CH	RHONE	473	20150910	20160429	1501	46.6467	8.4028	3235	2220	BW
CH	RHONE	473	20150910	20160920	1501	46.6467	8.4028	3235	2148	BA
CH	RHONE	473	20150910	20160920	1502	46.6407	8.3993	3125	1236	BA
CH	RHONE	473	20150910	20160429	1502	46.6407	8.3993	3125	1740	BW
CH	RHONE	473	20150910	20160429	1503	46.6316	8.3932	2929	1740	BW
CH	RHONE	473	20150910	20160920	1503	46.6316	8.3932	2929	834	BA
CH	RHONE	473	20150910	20160920	1512	46.6231	8.3983	2843	6	BA
CH	RHONE	473	20150910	20160429	1512	46.6231	8.3983	2843	1620	BW
CH	RHONE	473	20150910	20160920	1504	46.6123	8.3965	2747	-927	BA
CH	RHONE	473	20150910	20160429	1504	46.6123	8.3965	2747	1440	BW
CH	RHONE	473	20150910	20160429	1505	46.6046	8.3852	2603	560	BW
CH	RHONE	473	20150910	20160920	1505	46.6046	8.3852	2603	-3536	BA
CH	RHONE	473	20150910	20160920	1506	46.595	8.3836	2466	-4871	BA
CH	RHONE	473	20150910	20160429	1506	46.595	8.3836	2466	520	BW
CH	RHONE	473	20150910	20160920	1507	46.5889	8.3867	2358	-5474	BA
CH	RHONE	473	20150910	20160429	1507	46.5889	8.3867	2358	260	BW
CH	RHONE	473	20150910	20160920	1523	46.5868	8.3873	2321	-5287	BA
CH	RHONE	473	20150910	20160429	1523	46.5868	8.3873	2321	240	BW
CH	RHONE	473	20150910	20160920	1508	46.5848	8.3869	2296	-5389	BA
CH	RHONE	473	20150910	20160429	1508	46.5848	8.3869	2296	288	BW
CH	RHONE	473	20150910	20160429	1509	46.5828	8.3859	2248	308	BW
CH	RHONE	473	20150910	20160920	1509	46.5828	8.3859	2248	-5432	BA
CH	RHONE	473	20150910	20160429	1510	46.5818	8.3849	2228	320	BW
CH	RHONE	473	20150910	20160920	1510	46.5818	8.3849	2228	-4701	BA
CH	RHONE	473	20160920	20170926	1601	46.6467	8.4028	3235	1350	BA
CH	RHONE	473	20160920	20170421	1601	46.6467	8.4028	3235	1938	BW
CH	RHONE	473	20160920	20170421	1602	46.6407	8.3993	3125	1670	BW
CH	RHONE	473	20160920	20170926	1602	46.6407	8.3993	3125	945	BA
CH	RHONE	473	20160920	20170421	1603	46.6316	8.3932	2928	1640	BW
CH	RHONE	473	20160920	20170926	1603	46.6316	8.3932	2928	-240	BA
CH	RHONE	473	20160920	20170421	1512	46.6228	8.3985	2840	1492	BW
CH	RHONE	473	20160920	20170926	1512	46.6228	8.3985	2840	-1692	BA
CH	RHONE	473	20160920	20170421	1504	46.6119	8.3959	2742	1262	BW
CH	RHONE	473	20160920	20170926	1504	46.6119	8.3959	2742	-2131	BA
CH	RHONE	473	20160920	20170421	1605	46.6046	8.3852	2601	370	BW
CH	RHONE	473	20160920	20170926	1605	46.6046	8.3852	2601	-4689	BA
CH	RHONE	473	20160920	20170421	1505	46.6041	8.3847	2595	170	BW
CH	RHONE	473	20160920	20170421	1606	46.595	8.3836	2464	-50	BW
CH	RHONE	473	20160920	20170926	1606	46.595	8.3836	2464	-5706	BA
CH	RHONE	473	20160920	20170421	1607	46.5889	8.3866	2355	-130	BW
CH	RHONE	473	20160920	20170926	1607	46.5889	8.3866	2355	-6237	BA
CH	RHONE	473	20160920	20170421	1623	46.5867	8.3873	2316	50	BW
CH	RHONE	473	20160920	20170926	1623	46.5867	8.3873	2316	-5913	BA
CH	RHONE	473	20160920	20170926	1608	46.5848	8.3869	2291	-6354	BA
CH	RHONE	473	20160920	20170421	1608	46.5848	8.3869	2291	-50	BW

PU	GLACIER_NAME	WGMS_ID	FROM	TO	POINT_ID	LAT	LON	ELEV	MB	MB_CODE
CH	RHONE	473	20160920	20170926	1609	46.5828	8.386	2242	-6453	BA
CH	RHONE	473	20160920	20170421	1609	46.5828	8.386	2242	-120	BW
CH	RHONE	473	20160920	20170421	1610	46.5818	8.3849	2221	80	BW
CH	RHONE	473	20160920	20170926	1610	46.5818	8.3849	2221	-5922	BA
CH	SANKT ANNA	432	20150928	20161003	815	46.59628	8.5985	2854	-870	BA
CH	SANKT ANNA	432	20150928	20160415	815	46.59628	8.5985	2854	1300	BW
CH	SANKT ANNA	432	20150928	20161003	1115	46.59742	8.60518	2815	-340	BA
CH	SANKT ANNA	432	20150928	20160415	1115	46.59742	8.60518	2815	1830	BW
CH	SANKT ANNA	432	20150928	20161003	115	46.59675	8.60132	2790	-530	BA
CH	SANKT ANNA	432	20150928	20160415	115	46.59675	8.60132	2790	1660	BW
CH	SANKT ANNA	432	20150928	20161003	515	46.59752	8.60325	2764	-1310	BA
CH	SANKT ANNA	432	20150928	20160415	515	46.59752	8.60325	2764	1440	BW
CH	SANKT ANNA	432	20150928	20160415	212	46.59821	8.60176	2735	1300	BW
CH	SANKT ANNA	432	20150928	20161003	212	46.59821	8.60176	2735	-1360	BA
CH	SANKT ANNA	432	20150928	20160415	615	46.59924	8.60312	2705	1100	BW
CH	SANKT ANNA	432	20150928	20161003	615	46.59924	8.60312	2705	-1940	BA
CH	SANKT ANNA	432	20150928	20160415	315	46.59935	8.60149	2701	1320	BW
CH	SANKT ANNA	432	20150928	20161003	315	46.59935	8.60149	2701	-1530	BA
CH	SANKT ANNA	432	20150928	20160415	715	46.59973	8.60029	2681	1060	BW
CH	SANKT ANNA	432	20150928	20161003	715	46.59973	8.60029	2681	-1780	BA
CH	SANKT ANNA	432	20150928	20161003	415	46.60012	8.60172	2675	-2340	BA
CH	SANKT ANNA	432	20150928	20160415	415	46.60012	8.60172	2675	990	BW
CH	SANKT ANNA	432	20150928	20160415	1015	46.60045	8.60129	2656	1040	BW
CH	SANKT ANNA	432	20150928	20161003	1015	46.60045	8.60129	2656	-2280	BA
CH	SANKT ANNA	432	20150928	20160415	915	46.60091	8.60143	2638	950	BW
CH	SANKT ANNA	432	20150928	20161003	915	46.60091	8.60143	2638	-2560	BA
CH	SANKT ANNA	432	20161003	20170924	st8-15	46.5963	8.5983	2858	-1560	BA
CH	SANKT ANNA	432	20169999	20170422	st8-15	46.5963	8.5983	2858	1990	BW
CH	SANKT ANNA	432	20161003	20170924	st11-15	46.5974	8.6052	2816	-250	BA
CH	SANKT ANNA	432	20169999	20170422	st11-15	46.5974	8.6052	2816	2110	BW
CH	SANKT ANNA	432	20161003	20170924	st1-12	46.5968	8.6012	2787	-800	BA
CH	SANKT ANNA	432	20169999	20170422	st1-12	46.5968	8.6012	2787	430	BW
CH	SANKT ANNA	432	20169999	20170422	st2-16	46.5982	8.6017	2735	1580	BW
CH	SANKT ANNA	432	20161003	20170924	st2-16	46.5982	8.6017	2735	-1270	BA
CH	SANKT ANNA	432	20169999	20170422	st3-16	46.5994	8.6015	2701	1540	BW
CH	SANKT ANNA	432	20161003	20170924	st3-16	46.5994	8.6015	2701	-1600	BA
CH	SANKT ANNA	432	20169999	20170422	st7-16	46.5997	8.6004	2682	1350	BW
CH	SANKT ANNA	432	20161003	20170924	st7-16	46.5997	8.6004	2682	-2350	BA
CH	SANKT ANNA	432	20169999	20170422	st4-16	46.6001	8.6018	2676	1070	BW
CH	SANKT ANNA	432	20161003	20170924	st4-16	46.6001	8.6018	2676	-2540	BA
CH	SANKT ANNA	432	20169999	20170422	st9-16	46.6008	8.6014	2641	1260	BW
CH	SANKT ANNA	432	20161003	20170924	st9-16	46.6008	8.6014	2641	-2650	BA
CH	SCHWARZBACH	4340	20150928	20161003	215	46.59639	8.61016	2793	-1200	BA
CH	SCHWARZBACH	4340	20150928	20160415	215	46.59639	8.61016	2793	1850	BW
CH	SCHWARZBACH	4340	20150928	20160415	314	46.59604	8.61177	2785	1930	BW
CH	SCHWARZBACH	4340	20150928	20161003	314	46.59604	8.61177	2785	-1110	BA
CH	SCHWARZBACH	4340	20150928	20160415	115	46.59653	8.61207	2760	1500	BW
CH	SCHWARZBACH	4340	20150928	20161003	115	46.59653	8.61207	2760	-1830	BA
CH	SCHWARZBACH	4340	20169999	20170422	215	46.5964	8.6101	2794	1940	BW
CH	SCHWARZBACH	4340	20161003	20170924	215	46.5964	8.6101	2794	-1870	BA
CH	SCHWARZBACH	4340	20169999	20170422	116	46.5965	8.6121	2764	1640	BW
CH	SCHWARZBACH	4340	20161003	20170924	116	46.5965	8.6121	2764	-2380	BA
CH	SCHWARZBERG	395	20150921	20160822	15124	46.0074	7.93	2981	-522	BA
CH	SCHWARZBERG	395	20150921	20160822	15120	46.0164	7.9334	2849	-1332	BA
CH	SCHWARZBERG	395	20150921	20160822	15123	46.021	7.9361	2770	-1800	BA
CH	SCHWARZBERG	395	20160822	20170821	124	46.0075	7.93	2982	-2520	BA
CH	SCHWARZBERG	395	20160822	20170821	120	46.0165	7.9335	2853	-3258	BA
CH	SEX ROUGE	454	20150920	20160914	sr6-15	46.32756	7.21622	2835	150	BA
CH	SEX ROUGE	454	20150920	20160419	sr6-15	46.32756	7.21622	2835	1530	BW
CH	SEX ROUGE	454	20150920	20160914	sr1-12	46.32554	7.21209	2821	-330	BA
CH	SEX ROUGE	454	20150920	20160419	sr1-12	46.32554	7.21209	2821	1820	BW
CH	SEX ROUGE	454	20150920	20160419	sr7-15	46.32658	7.21281	2810	1730	BW
CH	SEX ROUGE	454	20150920	20160914	sr7-15	46.32658	7.21281	2810	40	BA
CH	SEX ROUGE	454	20150920	20160419	sr3-15	46.32851	7.21574	2806	1720	BW
CH	SEX ROUGE	454	20150920	20160914	sr3-15	46.32851	7.21574	2806	-110	BA
CH	SEX ROUGE	454	20150920	20160419	sr2-15	46.32705	7.21402	2804	1530	BW
CH	SEX ROUGE	454	20150920	20160914	sr2-15	46.32705	7.21402	2804	-250	BA
CH	SEX ROUGE	454	20150920	20160419	sr5-15	46.32785	7.21247	2785	1760	BW
CH	SEX ROUGE	454	20150920	20160914	sr5-15	46.32785	7.21247	2785	50	BA
CH	SEX ROUGE	454	20150920	20160419	sr4-15	46.32963	7.21521	2774	1460	BW
CH	SEX ROUGE	454	20150920	20160914	sr4-15	46.32963	7.21521	2774	-840	BA
CH	SEX ROUGE	454	20160914	20170908	sr3-15	46.3285	7.2157	2806	-2290	BA
CH	SEX ROUGE	454	20169999	20170430	sr3-15	46.3285	7.2157	2806	1740	BW
CH	SEX ROUGE	454	20169999	20170430	sr5-15	46.3278	7.2125	2785	1470	BW
CH	SEX ROUGE	454	20160914	20170908	sr5-15	46.3278	7.2125	2785	-2360	BA
CH	SILVRETTA	408	20159999	20160507	1	46.8461	10.0854	2984	1495	BW
CH	SILVRETTA	408	20150926	20160924	1501	46.8461	10.0854	2976	450	BA
CH	SILVRETTA	408	20159999	20160507	2	46.8486	10.0866	2955	1495	BW
CH	SILVRETTA	408	20150926	20160924	1502	46.8487	10.0866	2952	255	BA
CH	SILVRETTA	408	20150926	20160924	1510	46.8469	10.0813	2931	-81	BA
CH	SILVRETTA	408	20159999	20160507	10	46.8471	10.0808	2927	1288	BW
CH	SILVRETTA	408	20150926	20160924	1503	46.8508	10.0848	2900	350	BA
CH	SILVRETTA	408	20159999	20160507	3	46.8512	10.085	2888	1772	BW
CH	SILVRETTA	408	20159999	20160507	15	46.8486	10.0766	2852	1307	BW
CH	SILVRETTA	408	20159999	20160507	4	46.8543	10.0843	2819	1659	BW
CH	SILVRETTA	408	20150926	20160923	1504	46.8542	10.0843	2814	30	BA
CH	SILVRETTA	408	20159999	20160507	17	46.856	10.0807	2771	1316	BW
CH	SILVRETTA	408	20150926	20160923	1317	46.856	10.0807	2768	-1017	BA
CH	SILVRETTA	408	20159999	20160507	16	46.852	10.0791	2764	1274	BW
CH	SILVRETTA	408	20150926	20160923	1516	46.852	10.0791	2761	-999	BA
CH	SILVRETTA	408	20159999	20160507	11	46.8507	10.0709	2718	1293	BW
CH	SILVRETTA	408	20159999	20160507	5	46.8549	10.0757	2718	1410	BW
CH	SILVRETTA	408	20150925	20160923	1411	46.8507	10.0709	2715	-1035	BA
CH	SILVRETTA	408	20150925	20160923	1505	46.8549	10.0757	2711	-837	BA
CH	SILVRETTA	408	20159999	20160507	18	46.8537	10.0717	2686	1419	BW
CH	SILVRETTA	408	20150925	20160923	1518	46.8537	10.0717	2682	-837	BA

PU	GLACIER_NAME	WGMS_ID	FROM	TO	POINT_ID	LAT	LON	ELEV	MB	MB_CODE
CH	SILVRETTA	408	20159999	20160507	6	46.8569	10.0685	2620	1222	BW
CH	SILVRETTA	408	20150925	20160923	1506	46.8569	10.0685	2610	-1971	BA
CH	SILVRETTA	408	20159999	20160507	12	46.8542	10.067	2588	1368	BW
CH	SILVRETTA	408	20150925	20160923	1512	46.8542	10.067	2585	-1971	BA
CH	SILVRETTA	408	20159999	20160507	7	46.8568	10.0639	2562	1231	BW
CH	SILVRETTA	408	20150925	20160923	1507	46.8568	10.0639	2558	-2385	BA
CH	SILVRETTA	408	20150925	20160923	1513	46.8546	10.0613	2529	-3015	BA
CH	SILVRETTA	408	20159999	20160507	13	46.8545	10.061	2525	964	BW
CH	SILVRETTA	408	20159999	20160507	8	46.8558	10.0594	2519	1222	BW
CH	SILVRETTA	408	20150925	20160923	1508	46.8558	10.0595	2514	-2268	BA
CH	SILVRETTA	408	20159999	20160507	9	46.8557	10.0578	2492	1208	BW
CH	SILVRETTA	408	20150925	20160923	1509	46.8558	10.0578	2487	-3015	BA
CH	SILVRETTA	408	20169999	20170505	1	46.846	10.0854	2977	1500	BW
CH	SILVRETTA	408	20160924	20170930	1601	46.8461	10.0854	2976	-869	BA
CH	SILVRETTA	408	20160924	20170930	1602	46.8487	10.0866	2952	-771	BA
CH	SILVRETTA	408	20169999	20170505	2	46.8487	10.0866	2949	1560	BW
CH	SILVRETTA	408	20169999	20170505	10	46.8469	10.0812	2931	1280	BW
CH	SILVRETTA	408	20160924	20170930	1510	46.8469	10.0812	2930	-881	BA
CH	SILVRETTA	408	20160924	20170930	1110	46.8469	10.0812	2929	-1213	BA
CH	SILVRETTA	408	20169999	20170505	3	46.8508	10.0848	2902	1440	BW
CH	SILVRETTA	408	20160924	20170930	1603	46.8508	10.0848	2900	-338	BA
CH	SILVRETTA	408	20169999	20170505	15	46.8486	10.0766	2853	1260	BW
CH	SILVRETTA	408	20160923	20170929	1615	46.8486	10.0766	2849	-1652	BA
CH	SILVRETTA	408	20169999	20170505	4	46.8542	10.0843	2817	1312	BW
CH	SILVRETTA	408	20160923	20170929	1504	46.8542	10.0843	2813	-1287	BA
CH	SILVRETTA	408	20169999	20170505	17	46.856	10.0808	2772	1412	BW
CH	SILVRETTA	408	20169999	20170505	16	46.852	10.0791	2771	1452	BW
CH	SILVRETTA	408	20160923	20170929	1617	46.856	10.0808	2768	-1449	BA
CH	SILVRETTA	408	20160923	20170929	1516	46.852	10.079	2760	-1460	BA
CH	SILVRETTA	408	20169999	20170505	11	46.8507	10.0708	2723	1340	BW
CH	SILVRETTA	408	20160923	20170929	1611	46.8507	10.0709	2714	-1989	BA
CH	SILVRETTA	408	20169999	20170505	5	46.8549	10.0758	2712	1232	BW
CH	SILVRETTA	408	20160923	20170929	1505	46.8549	10.0757	2710	-1753	BA
CH	SILVRETTA	408	20169999	20170505	18	46.8538	10.0717	2687	1372	BW
CH	SILVRETTA	408	20160923	20170929	1518	46.8537	10.0716	2681	-1789	BA
CH	SILVRETTA	408	20169999	20170505	6	46.8569	10.0685	2609	1082	BW
CH	SILVRETTA	408	20160923	20170929	1506	46.8569	10.0685	2608	-2609	BA
CH	SILVRETTA	408	20169999	20170505	12	46.8542	10.0669	2587	1309	BW
CH	SILVRETTA	408	20160923	20170929	1512	46.8542	10.0669	2583	-2546	BA
CH	SILVRETTA	408	20160923	20170930	1607	46.8568	10.0639	2556	-2874	BA
CH	SILVRETTA	408	20169999	20170505	7	46.8568	10.0639	2555	1167	BW
CH	SILVRETTA	408	20160923	20170929	1613	46.8546	10.0612	2524	-3962	BA
CH	SILVRETTA	408	20169999	20170505	13	46.8545	10.061	2521	905	BW
CH	SILVRETTA	408	20160923	20170929	1608	46.8558	10.0595	2511	-3084	BA
CH	SILVRETTA	408	20169999	20170505	8	46.8558	10.0594	2499	1093	BW
CH	SILVRETTA	408	20160923	20170929	1609	46.8557	10.0578	2484	-3666	BA
CH	SILVRETTA	408	20169999	20170505	9	46.8557	10.0578	2480	1063	BW
CH	TSANFLEURON	371	20150921	20160419	ts2-15	46.31716	7.21686	2850	2210	BW
CH	TSANFLEURON	371	20150921	20160914	ts2-15	46.31716	7.21686	2850	480	BA
CH	TSANFLEURON	371	20150921	20160419	ts3-15	46.31509	7.22332	2804	2120	BW
CH	TSANFLEURON	371	20150921	20160914	ts3-15	46.31509	7.22332	2804	170	BA
CH	TSANFLEURON	371	20150921	20160914	ts1-15	46.32262	7.22518	2752	210	BA
CH	TSANFLEURON	371	20150921	20160419	ts1-15	46.32262	7.22518	2752	2280	BW
CH	TSANFLEURON	371	20150921	20160914	ts4-15	46.32423	7.23061	2718	-410	BA
CH	TSANFLEURON	371	20150921	20160419	ts4-15	46.32423	7.23061	2718	2190	BW
CH	TSANFLEURON	371	20150921	20160419	ts5-15	46.32167	7.23432	2684	1850	BW
CH	TSANFLEURON	371	20150921	20160914	ts5-15	46.32167	7.23432	2684	-1150	BA
CH	TSANFLEURON	371	20150921	20160419	ts6-15	46.32433	7.24043	2607	1490	BW
CH	TSANFLEURON	371	20150921	20160914	ts6-15	46.32433	7.24043	2607	-1770	BA
CH	TSANFLEURON	371	20160914	20170908	ts2-15	46.3172	7.2169	2851	-1370	BA
CH	TSANFLEURON	371	20169999	20170430	ts2-15	46.3172	7.2169	2851	1810	BW
CH	TSANFLEURON	371	20169999	20170430	ts3-15	46.3151	7.2233	2805	1740	BW
CH	TSANFLEURON	371	20160914	20170908	ts3-15	46.3151	7.2233	2805	-2050	BA
CH	TSANFLEURON	371	20160914	20170908	ts1-15	46.3225	7.2247	2756	-1640	BA
CH	TSANFLEURON	371	20169999	20170430	ts1-15	46.3225	7.2247	2756	1760	BW
CH	TSANFLEURON	371	20169999	20170430	ts4-15	46.3243	7.2308	2715	1810	BW
CH	TSANFLEURON	371	20160914	20170908	ts4-15	46.3243	7.2308	2715	-2340	BA
CH	TSANFLEURON	371	20169999	20170430	ts6-15	46.3243	7.2404	2608	1540	BW
CH	TSANFLEURON	371	20160914	20170908	ts6-15	46.3243	7.2404	2608	-3720	BA
CL - Chile										
CL	MOCHO CHOSHUENCO SE	3972	20150514	20160429	B2	-39.931	-72.028	2393	110	BA
CL	MOCHO CHOSHUENCO SE	3972	20150514	20160429	B1	-39.932	-72.027	2392	-150	BA
CL	MOCHO CHOSHUENCO SE	3972	20150514	20160429	B17	-39.935	-72.015	2032	-500	BA
CL	MOCHO CHOSHUENCO SE	3972	20150514	20160429	B19	-39.942	-72.03	2022	10	BA
CL	MOCHO CHOSHUENCO SE	3972	20150514	20160429	B18	-39.942	-72.019	1982	-280	BA
CL	MOCHO CHOSHUENCO SE	3972	20150514	20160429	B14	-39.947	-72.016	1919	-1350	BA
CL	MOCHO CHOSHUENCO SE	3972	20150514	20160429	B15	-39.942	-72.009	1918	-2100	BA
CL	MOCHO CHOSHUENCO SE	3972	20150514	20160429	B13	-39.951	-72.019	1917	-2180	BA
CL	MOCHO CHOSHUENCO SE	3972	20150514	20160429	B8	-39.945	-72.004	1887	-3480	BA
CL	MOCHO CHOSHUENCO SE	3972	20150514	20160429	B10	-39.949	-72.007	1881	-2490	BA
CL	MOCHO CHOSHUENCO SE	3972	20150514	20160429	B12	-39.952	-72.012	1817	-4700	BA
CL	MOCHO CHOSHUENCO SE	3972	20150514	20160429	B11	-39.945	-72.001	1811	-2820	BA
CL	MOCHO CHOSHUENCO SE	3972	20160429	20170412	B2	-39.931	-72.028	2393	80	BA
CL	MOCHO CHOSHUENCO SE	3972	20160429	20170412	B1	-39.932	-72.027	2392	-640	BA
CL	MOCHO CHOSHUENCO SE	3972	20160429	20170412	B18	-39.935	-72.015	2032	-1630	BA
CL	MOCHO CHOSHUENCO SE	3972	20160429	20170412	B19b	-39.942	-72.03	2022	-860	BA
CL	MOCHO CHOSHUENCO SE	3972	20160429	20170412	B19	-39.942	-72.019	1982	-1850	BA
CL	MOCHO CHOSHUENCO SE	3972	20160429	20170412	B15	-39.947	-72.016	1919	-1820	BA
CL	MOCHO CHOSHUENCO SE	3972	20160429	20170412	B17	-39.942	-72.009	1918	-3450	BA
CL	MOCHO CHOSHUENCO SE	3972	20160429	20170412	B13	-39.951	-72.019	1917	-3850	BA
CL	MOCHO CHOSHUENCO SE	3972	20160429	20170412	B8	-39.945	-72.004	1887	-4130	BA
CL	MOCHO CHOSHUENCO SE	3972	20160429	20170412	B10	-39.949	-72.007	1881	-4970	BA
CL	MOCHO CHOSHUENCO SE	3972	20160429	20170412	B12	-39.952	-72.012	1817	-6330	BA
CL	MOCHO CHOSHUENCO SE	3972	20160429	20170412	B11	-39.945	-72.001	1811	-4030	BA

PU	GLACIER_NAME	WGMS_ID	FROM	TO	POINT_ID	LAT	LON	ELEV	MB	MB_CODE
CN - China										
CN	PARLUNG NO. 94	3987	20150929	20160926	9	29.3846	96.97617	5333	-1032	BA
CN	PARLUNG NO. 94	3987	20150929	20160926	8	29.38583	96.97565	5317	-1404	BA
CN	PARLUNG NO. 94	3987	20150929	20160926	7	29.38775	96.97498	5280	-1758	BA
CN	PARLUNG NO. 94	3987	20150929	20160926	6	29.38863	96.97438	5264	-1797	BA
CN	PARLUNG NO. 94	3987	20150929	20160926	4	29.3906	96.97292	5232	-2070	BA
CN	PARLUNG NO. 94	3987	20150929	20160926	5	29.39072	96.97442	5237	-2193	BA
CN	PARLUNG NO. 94	3987	20150929	20160926	3	29.3952	96.97365	5160	-2844	BA
CN	PARLUNG NO. 94	3987	20150929	20160926	2	29.39728	96.97312	5132	-3312	BA
CN	PARLUNG NO. 94	3987	20150929	20160926	1	29.39828	96.9725	5108	-3348	BA
CN	PARLUNG NO. 94	3987	20160926	20171006	9	29.38472	96.97608	5330	-676	BA
CN	PARLUNG NO. 94	3987	20160926	20171006	8	29.38593	96.97563	5317	-1050	BA
CN	PARLUNG NO. 94	3987	20160926	20171006	7	29.38773	96.975	5283	-2125	BA
CN	PARLUNG NO. 94	3987	20160926	20171006	6	29.38863	96.97435	5264	-1761	BA
CN	PARLUNG NO. 94	3987	20160926	20171006	5	29.39073	96.97438	5233	-2177	BA
CN	PARLUNG NO. 94	3987	20160926	20171006	4	29.39072	96.9744	5232	-2762	BA
CN	PARLUNG NO. 94	3987	20160926	20171006	3	29.39517	96.97358	5160	-3070	BA
CN	PARLUNG NO. 94	3987	20160926	20171006	2	29.39727	96.97312	5132	-3637	BA
CN	PARLUNG NO. 94	3987	20160926	20171006	1	29.39827	96.9725	5109	-3911	BA
CN	URUMQI GLACIER NO. 1 E-BRANCH	1511	20150828	20160902	E-K	43.1047	86.8065	4107	-47	BA
CN	URUMQI GLACIER NO. 1 E-BRANCH	1511	20150828	20160902	E-J	43.105	86.8064	4097	-159	BA
CN	URUMQI GLACIER NO. 1 E-BRANCH	1511	20150828	20160902	E-I	43.1055	86.8064	4085	-719	BA
CN	URUMQI GLACIER NO. 1 E-BRANCH	1511	20150828	20160902	E-H1	43.1064	86.805	4081	-966	BA
CN	URUMQI GLACIER NO. 1 E-BRANCH	1511	20150828	20160902	E-H3	43.1058	86.8071	4081	-510	BA
CN	URUMQI GLACIER NO. 1 E-BRANCH	1511	20150828	20160902	E-H2	43.106	86.8063	4076	-694	BA
CN	URUMQI GLACIER NO. 1 E-BRANCH	1511	20150828	20160902	E-G3	43.1062	86.8078	4075	-341	BA
CN	URUMQI GLACIER NO. 1 E-BRANCH	1511	20150828	20160902	E-G1	43.1076	86.8062	4051	-1044	BA
CN	URUMQI GLACIER NO. 1 E-BRANCH	1511	20150828	20160902	E-G2	43.1073	86.8069	4051	-1023	BA
CN	URUMQI GLACIER NO. 1 E-BRANCH	1511	20150828	20160902	E-F3	43.1076	86.8091	4036	-512	BA
CN	URUMQI GLACIER NO. 1 E-BRANCH	1511	20150828	20160902	E-F1	43.1084	86.8066	4034	-1131	BA
CN	URUMQI GLACIER NO. 1 E-BRANCH	1511	20150828	20160902	E-F2	43.1083	86.8076	4028	-1037	BA
CN	URUMQI GLACIER NO. 1 E-BRANCH	1511	20150828	20160902	E-E1	43.1114	86.8074	3962	-1228	BA
CN	URUMQI GLACIER NO. 1 E-BRANCH	1511	20150828	20160902	E-E2	43.111	86.8088	3962	-1051	BA
CN	URUMQI GLACIER NO. 1 E-BRANCH	1511	20150828	20160902	E-E3	43.111	86.8105	3961	-1230	BA
CN	URUMQI GLACIER NO. 1 E-BRANCH	1511	20150828	20160902	E-D3	43.1136	86.8129	3915	-834	BA
CN	URUMQI GLACIER NO. 1 E-BRANCH	1511	20150828	20160902	E-D2	43.1142	86.8113	3911	-2151	BA
CN	URUMQI GLACIER NO. 1 E-BRANCH	1511	20150828	20160902	E-C3	43.1148	86.814	3869	-2142	BA
CN	URUMQI GLACIER NO. 1 E-BRANCH	1511	20150828	20160902	E-C2	43.1156	86.8131	3867	-2442	BA
CN	URUMQI GLACIER NO. 1 E-BRANCH	1511	20150828	20160902	E-C1	43.1165	86.8124	3865	-2520	BA
CN	URUMQI GLACIER NO. 1 E-BRANCH	1511	20150828	20160902	E-B3	43.1154	86.8156	3831	-2997	BA
CN	URUMQI GLACIER NO. 1 E-BRANCH	1511	20150828	20160902	E-B2	43.1162	86.8155	3813	-2682	BA
CN	URUMQI GLACIER NO. 1 E-BRANCH	1511	20150828	20160902	E-A	43.1163	86.8157	3807	-3897	BA
CN	URUMQI GLACIER NO. 1 E-BRANCH	1511	20150828	20160902	E-B1	43.1169	86.8156	3800	-3006	BA
CN	URUMQI GLACIER NO. 1 E-BRANCH	1511	20160902	20170826	E-H1	43.1063	86.8046	3992	-1114	BA
CN	URUMQI GLACIER NO. 1 E-BRANCH	1511	20160902	20170826	E-H3	43.1055	86.8074	3992	1428	BA
CN	URUMQI GLACIER NO. 1 E-BRANCH	1511	20160902	20170826	E-I	43.1055	86.8064	3990	-345	BA
CN	URUMQI GLACIER NO. 1 E-BRANCH	1511	20160902	20170826	E-H2	43.1055	86.8062	3989	-396	BA
CN	URUMQI GLACIER NO. 1 E-BRANCH	1511	20160902	20170826	E-G3	43.1064	86.8082	3971	-281	BA
CN	URUMQI GLACIER NO. 1 E-BRANCH	1511	20160902	20170826	E-G1	43.1075	86.806	3957	-951	BA
CN	URUMQI GLACIER NO. 1 E-BRANCH	1511	20160902	20170826	E-G2	43.107	86.8071	3956	-733	BA
CN	URUMQI GLACIER NO. 1 E-BRANCH	1511	20160902	20170826	E-F3	43.1078	86.8094	3936	-546	BA
CN	URUMQI GLACIER NO. 1 E-BRANCH	1511	20160902	20170826	E-F1	43.1084	86.8065	3935	-1134	BA
CN	URUMQI GLACIER NO. 1 E-BRANCH	1511	20160902	20170826	E-F2	43.1081	86.8077	3932	-1056	BA
CN	URUMQI GLACIER NO. 1 E-BRANCH	1511	20160902	20170826	E-E3	43.1091	86.8101	3907	-625	BA
CN	URUMQI GLACIER NO. 1 E-BRANCH	1511	20160902	20170826	E-E2	43.1096	86.8087	3893	-1140	BA
CN	URUMQI GLACIER NO. 1 E-BRANCH	1511	20160902	20170826	E-E1	43.1102	86.8072	3891	-1113	BA
CN	URUMQI GLACIER NO. 1 E-BRANCH	1511	20160902	20170826	E-D3	43.1114	86.8106	3852	-1208	BA
CN	URUMQI GLACIER NO. 1 E-BRANCH	1511	20160902	20170826	E-D1	43.1127	86.8081	3839	-1520	BA
CN	URUMQI GLACIER NO. 1 E-BRANCH	1511	20160902	20170826	E-D2	43.1123	86.8091	3836	-1747	BA
CN	URUMQI GLACIER NO. 1 E-BRANCH	1511	20160902	20170826	E-C3	43.1134	86.8126	3818	-1761	BA
CN	URUMQI GLACIER NO. 1 E-BRANCH	1511	20160902	20170826	E-C2	43.1142	86.8112	3814	-1848	BA
CN	URUMQI GLACIER NO. 1 E-BRANCH	1511	20160902	20170826	E-C1	43.1149	86.8102	3807	-1623	BA
CN	URUMQI GLACIER NO. 1 E-BRANCH	1511	20160902	20170826	E-B1	43.1164	86.8122	3772	-2139	BA
CN	URUMQI GLACIER NO. 1 E-BRANCH	1511	20160902	20170826	E-B2	43.116	86.8128	3768	-2379	BA
CN	URUMQI GLACIER NO. 1 E-BRANCH	1511	20160902	20170826	E-B3	43.1156	86.8132	3767	-2439	BA
CN	URUMQI GLACIER NO. 1 E-BRANCH	1511	20160902	20170826	E-A2	43.1158	86.814	3745	-2583	BA
CN	URUMQI GLACIER NO. 1 E-BRANCH	1511	20160902	20170826	E-A1	43.1165	86.8136	3745	-2826	BA
CN	URUMQI GLACIER NO. 1 W-BRANCH	1512	20150902	20160901	W-I	43.1169	86.801	4145	-691	BA
CN	URUMQI GLACIER NO. 1 W-BRANCH	1512	20150902	20160901	W-H1	43.1184	86.8005	4119	-1015	BA
CN	URUMQI GLACIER NO. 1 W-BRANCH	1512	20150902	20160901	W-H2	43.1174	86.8019	4116	-763	BA
CN	URUMQI GLACIER NO. 1 W-BRANCH	1512	20150902	20160901	W-H3	43.117	86.8026	4114	-685	BA
CN	URUMQI GLACIER NO. 1 W-BRANCH	1512	20150902	20160901	W-G3	43.117	86.8045	4093	758	BA
CN	URUMQI GLACIER NO. 1 W-BRANCH	1512	20150902	20160901	W-G1	43.1194	86.8028	4089	-1132	BA
CN	URUMQI GLACIER NO. 1 W-BRANCH	1512	20150902	20160901	W-G2	43.1179	86.8038	4078	-1083	BA
CN	URUMQI GLACIER NO. 1 W-BRANCH	1512	20150902	20160901	W-F3	43.1174	86.8066	4055	-1402	BA
CN	URUMQI GLACIER NO. 1 W-BRANCH	1512	20150902	20160901	W-F1	43.1197	86.8051	4046	-1377	BA
CN	URUMQI GLACIER NO. 1 W-BRANCH	1512	20150902	20160901	W-F2	43.1182	86.8063	4045	-1688	BA
CN	URUMQI GLACIER NO. 1 W-BRANCH	1512	20150902	20160901	W-E1	43.1201	86.8079	3996	-1796	BA
CN	URUMQI GLACIER NO. 1 W-BRANCH	1512	20150902	20160901	W-E2	43.1194	86.8082	3986	-1549	BA
CN	URUMQI GLACIER NO. 1 W-BRANCH	1512	20150902	20160901	W-E3	43.1184	86.8085	3978	-1460	BA
CN	URUMQI GLACIER NO. 1 W-BRANCH	1512	20150902	20160901	W-D2	43.1191	86.8102	3943	-2208	BA
CN	URUMQI GLACIER NO. 1 W-BRANCH	1512	20150902	20160901	W-D1	43.1198	86.8101	3941	-1660	BA
CN	URUMQI GLACIER NO. 1 W-BRANCH	1512	20150902	20160901	W-D3	43.119	86.8101	3941	-2411	BA
CN	URUMQI GLACIER NO. 1 W-BRANCH	1512	20150902	20160901	W-C1	43.1192	86.8111	3918	-2940	BA
CN	URUMQI GLACIER NO. 1 W-BRANCH	1512	20150902	20160901	W-C2	43.1191	86.8111	3915	-2532	BA
CN	URUMQI GLACIER NO. 1 W-BRANCH	1512	20150902	20160901	W-B1	43.1192	86.8114	3904	-3507	BA
CN	URUMQI GLACIER NO. 1 W-BRANCH	1512	20150902	20160901	W-A	43.1191	86.8114	3899	-2610	BA
CN	URUMQI GLACIER NO. 1 W-BRANCH	1512	20160902	20170826	E-K	43.1047	86.8065	4023	650	BA
CN	URUMQI GLACIER NO. 1 W-BRANCH	1512	20160902	20170826	W-H2	43.1175	86.8017	4021	-642	BA
CN	URUMQI GLACIER NO. 1 W-BRANCH	1512	20160902	20170826	W-H3	43.1169	86.8026	4018	-83	BA
CN	URUMQI GLACIER NO. 1 W-BRANCH	1512	20160902	20170826	E-J	43.105	86.8064	4008	-97	BA
CN	URUMQI GLACIER NO. 1 W-BRANCH	1512	20160902	20170826	W-G3	43.1171	86.8037	3999	-659	BA
CN	URUMQI GLACIER NO. 1 W-BRANCH	1512	20160902	20170826	W-G2	43.118	86.8031	3991	-1250	BA
CN	URUMQI GLACIER NO. 1 W-BRANCH	1512	20160902	20170826	W-G1	43.1193	86.8028	3991	-1165	BA
CN	URUMQI GLACIER NO. 1 W-BRANCH	1512	20160902	20170826	W-F3	43.1174	86.8049	3975	-876	BA
CN	URUMQI GLACIER NO. 1 W-BRANCH	1512	20160902	20170826	W-F1	43.1195	86.804	3967	-1394	BA

PU	GLACIER_NAME	WGMS_ID	FROM	TO	POINT_ID	LAT	LON	ELEV	MB	MB_CODE
CN	URUMQI GLACIER NO. 1 W-BRANCH	1512	20160902	20170826	W-F2	43.1185	86.8043	3966	-1449	BA
CN	URUMQI GLACIER NO. 1 W-BRANCH	1512	20160902	20170826	W-E2	43.1184	86.8063	3946	-1472	BA
CN	URUMQI GLACIER NO. 1 W-BRANCH	1512	20160902	20170826	W-E1	43.1199	86.8058	3932	-1237	BA
CN	URUMQI GLACIER NO. 1 W-BRANCH	1512	20160902	20170826	W-D3	43.1184	86.8074	3924	-1619	BA
CN	URUMQI GLACIER NO. 1 W-BRANCH	1512	20160902	20170826	W-D2	43.1191	86.8071	3918	-1533	BA
CN	URUMQI GLACIER NO. 1 W-BRANCH	1512	20160902	20170826	W-D1	43.12	86.8069	3916	-1558	BA
CN	URUMQI GLACIER NO. 1 W-BRANCH	1512	20160902	20170826	W-C2	43.1188	86.8089	3874	-1898	BA
CN	URUMQI GLACIER NO. 1 W-BRANCH	1512	20160902	20170826	W-C1	43.1197	86.809	3866	-2481	BA
CN	URUMQI GLACIER NO. 1 W-BRANCH	1512	20160902	20170826	W-B2	43.1191	86.8098	3855	-1974	BA
CN	URUMQI GLACIER NO. 1 W-BRANCH	1512	20160902	20170826	W-B1	43.1197	86.8098	3853	-2309	BA
CN	URUMQI GLACIER NO. 1 W-BRANCH	1512	20160902	20170826	W-E3	43.1168	86.807		-1199	BA
CN	URUMQI GLACIER NO. 1 W-BRANCH	1512	20160902	20170826	W-H1	43.1178	86.8009		-990	BA
CO - Colombia										
CO	CONEJERAS	2721	20160101	20161231	14	4.81591	-75.37336	4895	-3990	BA
CO	CONEJERAS	2721	20160101	20161231	13	4.81615	-75.37317	4829	-3728	BA
CO	CONEJERAS	2721	20160101	20161231	10	4.81325	-75.36977	4785	-5871	BA
CO	CONEJERAS	2721	20160101	20161231	11	4.80948	-75.37164	4765	-5529	BA
CO	CONEJERAS	2721	20160101	20161231	9	4.81202	-75.37065	4752	-5873	BA
CO	CONEJERAS	2721	20160101	20161231	8	4.81105	-75.37186	4745	-6178	BA
CO	CONEJERAS	2721	20160101	20161231	7	4.81275	-75.37246	4745	-7038	BA
CO	CONEJERAS	2721	20160101	20161231	4	4.81524	-75.37225	4704	-5145	BA
CO	CONEJERAS	2721	20160101	20161231	6	4.81387	-75.37137	4703	-5871	BA
CO	CONEJERAS	2721	20160101	20161231	5	4.81475	-75.37094	4698	-5546	BA
CO	CONEJERAS	2721	20170122	20180131	14	4.8078	-75.37148	4895	-1665	BA
CO	CONEJERAS	2721	20170122	20180131	13	4.80938	-75.37176	4829	-2091	BA
CO	CONEJERAS	2721	20170122	20180131	10	4.81094	-75.37197	4785	-3571	BA
CO	CONEJERAS	2721	20170122	20180131	11	4.81192	-75.37077	4765	-4286	BA
CO	CONEJERAS	2721	20170122	20180131	9	4.81265	-75.37258	4752	-5054	BA
CO	CONEJERAS	2721	20170122	20180131	8	4.81376	-75.37149	4745	-5140	BA
CO	CONEJERAS	2721	20170122	20180131	7	4.81465	-75.37106	4745	-5980	BA
CO	RITACUBA BLANCO	2763	20160223	20170213	10	6.49522	-72.30741	5151	827	BA
CO	RITACUBA BLANCO	2763	20160223	20170213	9	6.49508	-72.30915	5110	921	BA
CO	RITACUBA BLANCO	2763	20160223	20170213	7	6.4946	-72.31108	5060	156	BA
CO	RITACUBA BLANCO	2763	20160223	20170213	8	6.4952	-72.31135	5055	1031	BA
CO	RITACUBA BLANCO	2763	20160223	20170213	6	6.49392	-72.31291	5010	-1087	BA
CO	RITACUBA BLANCO	2763	20160223	20170213	5	6.49521	-72.31347	5004	-531	BA
CO	RITACUBA BLANCO	2763	20160223	20170213	4	6.4951	-72.31526	4956	-2121	BA
CO	RITACUBA BLANCO	2763	20160223	20170213	3	6.49379	-72.31507	4947	-1618	BA
CO	RITACUBA BLANCO	2763	20160223	20170213	2	6.49471	-72.31728	4885	-2543	BA
CO	RITACUBA BLANCO	2763	20160223	20170213	1	6.49422	-72.31743	4872	-2736	BA
CO	RITACUBA BLANCO	2763	20170213	20180214	10	6.49522	-72.30741	5151	1096	BA
CO	RITACUBA BLANCO	2763	20170213	20180214	9	6.49508	-72.30915	5110	1160	BA
CO	RITACUBA BLANCO	2763	20170213	20180214	7	6.4946	-72.31108	5060	33	BA
CO	RITACUBA BLANCO	2763	20170213	20180214	8	6.4952	-72.31135	5055	831	BA
CO	RITACUBA BLANCO	2763	20170213	20180214	6	6.49392	-72.31291	5010	523	BA
CO	RITACUBA BLANCO	2763	20170213	20180214	5	6.49521	-72.31347	5004	856	BA
CO	RITACUBA BLANCO	2763	20170213	20180214	4	6.4951	-72.31526	4956	-205	BA
CO	RITACUBA BLANCO	2763	20170213	20180214	3	6.49379	-72.31507	4947	-284	BA
CO	RITACUBA BLANCO	2763	20170213	20180214	2	6.49471	-72.31728	4885	-773	BA
CO	RITACUBA BLANCO	2763	20170213	20180214	1	6.49422	-72.31743	4872	-1214	BA
EC - Ecuador										
EC	ANTIZANA15ALPHA	1624	20151229	20161215	P2			5350	140	BA
EC	ANTIZANA15ALPHA	1624	20151229	20161215	P1			5250	10	BA
EC	ANTIZANA15ALPHA	1624	20151229	20161227	U5			5050	-1110	BA
EC	ANTIZANA15ALPHA	1624	20151229	20161227	U4			4980	-1240	BA
EC	ANTIZANA15ALPHA	1624	20151229	20161227	U3			4935	-1870	BA
EC	ANTIZANA15ALPHA	1624	20151229	20161227	U2			4895	-2220	BA
EC	ANTIZANA15ALPHA	1624	20151229	20161227	U1			4868	-2750	BA
EC	ANTIZANA15ALPHA	1624	20161215	20171221	P2			5350	160	BA
EC	ANTIZANA15ALPHA	1624	20161215	20171221	P1			5250	35	BA
EC	ANTIZANA15ALPHA	1624	20161227	20180104	U5			5043	-1420	BA
EC	ANTIZANA15ALPHA	1624	20161227	20180104	V4			4979	-1690	BA
EC	ANTIZANA15ALPHA	1624	20161227	20180104	U3			4931	-2340	BA
EC	ANTIZANA15ALPHA	1624	20161227	20180104	V2			4892	-3040	BA
EC	ANTIZANA15ALPHA	1624	20161227	20180104	U2			4885	-3070	BA
EC	ANTIZANA15ALPHA	1624	20161227	20180104	V1			4863	-3957	BA
FR - France										
FR	TRE LA TETE	1314	20150930	20160926	10			3550	1400	BA
FR	TRE LA TETE	1314	20150930	20160926	9			3450	1300	BA
FR	TRE LA TETE	1314	20150930	20160926	8			3300	500	BA
FR	TRE LA TETE	1314	20150930	20160926	11			3300	1000	BA
FR	TRE LA TETE	1314	20150930	20160926	7			3250	200	BA
FR	TRE LA TETE	1314	20150930	20160926	6			2770	-1900	BA
FR	TRE LA TETE	1314	20150930	20160926	5			2600	-2200	BA
FR	TRE LA TETE	1314	20150930	20160926	4			2550	-2600	BA
FR	TRE LA TETE	1314	20150930	20160926	3			2400	-2900	BA
FR	TRE LA TETE	1314	20150930	20160926	2			2350	-3300	BA
FR	TRE LA TETE	1314	20150930	20160926	1			2200	-2700	BA
GL - Greenland										
GL	FREYA	3350	20150901	20160510	33	74.3705	-20.82961	921	608	BW
GL	FREYA	3350	20150901	20160510	32	74.37004	-20.82273	897	608	BW
GL	FREYA	3350	20150901	20160510	35	74.36816	-20.81521	885	800	BW
GL	FREYA	3350	20150901	20160510	34	74.36878	-20.81846	881	640	BW
GL	FREYA	3350	20150901	20160510	31	74.37102	-20.81278	877	832	BW
GL	FREYA	3350	20150901	20160510	11	74.36878	-20.81656	868	704	BW
GL	FREYA	3350	20150901	20160510	30	74.37299	-20.81163	863	592	BW
GL	FREYA	3350	20150901	20160510	53	74.36958	-20.80671	862	896	BW
GL	FREYA	3350	20150901	20160510	54	74.37029	-20.80338	859	864	BW
GL	FREYA	3350	20150901	20160510	10	74.37173	-20.81301	859	877	BW
GL	FREYA	3350	20150901	20160510	36	74.37119	-20.80663	859	960	BW
GL	FREYA	3350	20150901	20160510	55	74.37218	-20.80093	856	864	BW
GL	FREYA	3350	20150901	20160510	37	74.37254	-20.80475	854	832	BW

PU	GLACIER_NAME	WGMS_ID	FROM	TO	POINT_ID	LAT	LON	ELEV	MB	MB_CODE
GL	FREYA	3350	20150901	20160510	56	74.37405	-20.79788	843	704	BW
GL	FREYA	3350	20150901	20160510	38	74.3745	-20.80253	836	736	BW
GL	FREYA	3350	20150901	20160510	57	74.37585	-20.79845	818	624	BW
GL	FREYA	3350	20150901	20160510	29	74.37595	-20.81176	808	704	BW
GL	FREYA	3350	20150901	20160510	39	74.37648	-20.80387	804	576	BW
GL	FREYA	3350	20150901	20160510	58	74.37854	-20.80115	801	992	BW
GL	FREYA	3350	20150901	20160510	28	74.37792	-20.8129	801	608	BW
GL	FREYA	3350	20150901	20160510	9	74.3755	-20.80804	801	864	BW
GL	FREYA	3350	20150901	20160510	27	74.37971	-20.81584	799	640	BW
GL	FREYA	3350	20150901	20160510	40	74.37854	-20.80464	798	608	BW
GL	FREYA	3350	20150901	20160510	26	74.38097	-20.81895	787	608	BW
GL	FREYA	3350	20150817	20160831	8	74.3796	-20.8141	778	-355	BA
GL	FREYA	3350	20150901	20160510	8	74.37962	-20.81411	776	608	BW
GL	FREYA	3350	20150901	20160510	41	74.38285	-20.81028	768	624	BW
GL	FREYA	3350	20150901	20160510	42	74.38464	-20.81492	744	320	BW
GL	FREYA	3350	20150901	20160510	25	74.3834	-20.82392	742	688	BW
GL	FREYA	3350	20150901	20160510	24	74.38466	-20.82717	732	672	BW
GL	FREYA	3350	20150901	20160510	7	74.38358	-20.82352	724	704	BW
GL	FREYA	3350	20150817	20160831	7	74.3836	-20.8235	724	-389	BA
GL	FREYA	3350	20150901	20160510	60	74.3835	-20.83487	723	768	BW
GL	FREYA	3350	20150901	20160510	23	74.38583	-20.83018	719	688	BW
GL	FREYA	3350	20150901	20160510	59	74.38296	-20.82841	717	704	BW
GL	FREYA	3350	20150901	20160510	43	74.38734	-20.82271	704	896	BW
GL	FREYA	3350	20150901	20160510	22	74.38708	-20.8336	703	688	BW
GL	FREYA	3350	20150901	20160510	61	74.38512	-20.83931	702	832	BW
GL	FREYA	3350	20150901	20160510	21	74.38834	-20.83705	692	640	BW
GL	FREYA	3350	20150901	20160510	62	74.38628	-20.84422	689	640	BW
GL	FREYA	3350	20150901	20160510	6	74.38753	-20.83196	688	640	BW
GL	FREYA	3350	20150817	20160831	6	74.3875	-20.832	686	-422	BA
GL	FREYA	3350	20150901	20160510	44	74.38895	-20.82675	684	800	BW
GL	FREYA	3350	20150901	20160510	66	74.38878	-20.82939	683	640	BW
GL	FREYA	3350	20150901	20160510	20	74.38942	-20.8405	683	608	BW
GL	FREYA	3350	20150901	20160510	63	74.38745	-20.84718	681	800	BW
GL	FREYA	3350	20150901	20160510	65	74.3878	-20.83622	681	640	BW
GL	FREYA	3350	20150901	20160510	64	74.38807	-20.84144	673	640	BW
GL	FREYA	3350	20150901	20160510	67	74.39075	-20.8283	668	640	BW
GL	FREYA	3350	20150901	20160510	19	74.38987	-20.84689	665	560	BW
GL	FREYA	3350	20150901	20160510	14	74.39291	-20.84439	658	544	BW
GL	FREYA	3350	20150901	20160510	18	74.38996	-20.85331	656	624	BW
GL	FREYA	3350	20150901	20160510	15	74.3922	-20.84786	655	496	BW
GL	FREYA	3350	20150901	20160510	68	74.39175	-20.84048	653	576	BW
GL	FREYA	3350	20150901	20160510	17	74.39024	-20.85774	653	560	BW
GL	FREYA	3350	20150901	20160510	13	74.39435	-20.84028	653	800	BW
GL	FREYA	3350	20150901	20160510	16	74.39113	-20.85267	650	480	BW
GL	FREYA	3350	20150901	20160510	12	74.39533	-20.8416	649	560	BW
GL	FREYA	3350	20150901	20160510	5	74.39157	-20.84754	646	557	BW
GL	FREYA	3350	20150901	20160510	45	74.39354	-20.83789	644	480	BW
GL	FREYA	3350	20150817	20160831	5	74.3915	-20.8475	642	-1368	BA
GL	FREYA	3350	20150901	20160510	69	74.39507	-20.84074	640	608	BW
GL	FREYA	3350	20150901	20160510	73	74.39275	-20.86281	607	544	BW
GL	FREYA	3350	20150901	20160510	72	74.39418	-20.85913	596	496	BW
GL	FREYA	3350	20150817	20160831	4	74.3951	-20.8567	592	-1368	BA
GL	FREYA	3350	20150901	20160510	4	74.39507	-20.85669	592	480	BW
GL	FREYA	3350	20150901	20160510	74	74.394	-20.86783	588	400	BW
GL	FREYA	3350	20150901	20160510	71	74.39445	-20.85284	587	512	BW
GL	FREYA	3350	20150901	20160510	46	74.39552	-20.85572	583	704	BW
GL	FREYA	3350	20150901	20160510	70	74.39542	-20.84773	582	576	BW
GL	FREYA	3350	20150901	20160510	75	74.39661	-20.86687	535	464	BW
GL	FREYA	3350	20150901	20160510	47	74.39741	-20.86333	531	480	BW
GL	FREYA	3350	20150901	20160510	76	74.39795	-20.8638	526	496	BW
GL	FREYA	3350	20150901	20160510	77	74.39911	-20.86165	524	576	BW
GL	FREYA	3350	20150901	20160510	78	74.40001	-20.86424	514	672	BW
GL	FREYA	3350	20150901	20160510	48	74.39876	-20.86852	510	448	BW
GL	FREYA	3350	20150901	20160510	81	74.39841	-20.87828	507	646	BW
GL	FREYA	3350	20150817	20160831	3	74.3995	-20.8712	506	-1584	BA
GL	FREYA	3350	20150901	20160510	3	74.39948	-20.87115	500	470	BW
GL	FREYA	3350	20150901	20160510	80	74.39912	-20.88028	499	512	BW
GL	FREYA	3350	20150901	20160510	79	74.40028	-20.87227	483	496	BW
GL	FREYA	3350	20150901	20160510	82	74.40029	-20.8827	474	672	BW
GL	FREYA	3350	20150901	20160510	49	74.40046	-20.8744	473	464	BW
GL	FREYA	3350	20150901	20160510	83	74.40128	-20.88109	458	416	BW
GL	FREYA	3350	20150817	20160831	2	74.4027	-20.8812	443	-1179	BA
GL	FREYA	3350	20150901	20160510	84	74.40262	-20.87529	440	448	BW
GL	FREYA	3350	20150901	20160510	2	74.40271	-20.88115	438	614	BW
GL	FREYA	3350	20150901	20160510	50	74.40235	-20.87912	437	512	BW
GL	FREYA	3350	20150901	20160510	85	74.4036	-20.87791	433	1056	BW
GL	FREYA	3350	20150901	20160510	86	74.40343	-20.88051	421	928	BW
GL	FREYA	3350	20150901	20160510	87	74.40289	-20.88461	418	400	BW
GL	FREYA	3350	20150901	20160510	88	74.40289	-20.88798	418	576	BW
GL	FREYA	3350	20150901	20160510	89	74.40352	-20.88991	403	512	BW
GL	FREYA	3350	20150901	20160510	51	74.40414	-20.88557	389	368	BW
GL	FREYA	3350	20150901	20160510	90	74.40414	-20.88794	387	592	BW
GL	FREYA	3350	20150901	20160510	1	74.40531	-20.88996	379	675	BW
GL	FREYA	3350	20150901	20160510	91	74.40495	-20.8865	373	608	BW
GL	FREYA	3350	20150901	20160510	92	74.40603	-20.88699	369	1056	BW
GL	FREYA	3350	20150901	20160510	52	74.4054	-20.89103	348	816	BW
GL	FREYA	3350	20150901	20160510	93	74.40558	-20.89186	345	800	BW
GL	FREYA	3350	20150901	20160510	94	74.40603	-20.89379	322	480	BW
GL	FREYA	3350	20150901	20160510	95	74.40693	-20.89748	274	736	BW
GL	QAANAAQ ICE CAP	4575	20150730	20160730	6	77.5259	-69.0762	968	157	BA
GL	QAANAAQ ICE CAP	4575	20150730	20160730	5	77.5161	-69.1095	839	-413	BA
GL	QAANAAQ ICE CAP	4575	20150730	20160730	4	77.5103	-69.1383	739	-802	BA
GL	QAANAAQ ICE CAP	4575	20150723	20160731	3	77.5024	-69.172	584	-1385	BA
GL	QAANAAQ ICE CAP	4575	20150730	20160731	2	77.4978	-69.212	427	-2166	BA
GL	QAANAAQ ICE CAP	4575	20150730	20160731	1	77.4908	-69.2507	243	-1777	BA
GL	QASIGIANNGUIT	4566	20160521	20160905	17	64.1556	-51.35555	941	-2045	BS

PU	GLACIER_NAME	WGMS_ID	FROM	TO	POINT_ID	LAT	LON	ELEV	MB	MB_CODE
GL	QASIGIANNGUIT	4566	20150907	20160521	7	64.1556	-51.35555	941	937	BW
GL	QASIGIANNGUIT	4566	20150907	20160521	6	64.15669	-51.35486	914	499	BW
GL	QASIGIANNGUIT	4566	20160521	20160905	16	64.15669	-51.35486	914	-2385	BS
GL	QASIGIANNGUIT	4566	20160521	20160905	15	64.15763	-51.35488	890	-2283	BS
GL	QASIGIANNGUIT	4566	20160521	20160905	19	64.15643	-51.35988	890	-1756	BS
GL	QASIGIANNGUIT	4566	20150907	20160521	5	64.15763	-51.35488	890	748	BW
GL	QASIGIANNGUIT	4566	20150907	20160521	9	64.15643	-51.35988	890	631	BW
GL	QASIGIANNGUIT	4566	20150907	20160521	8	64.158	-51.35212	885	442	BW
GL	QASIGIANNGUIT	4566	20160521	20160905	18	64.158	-51.35212	885	-2284	BS
GL	QASIGIANNGUIT	4566	20150907	20160521	4	64.15975	-51.35744	767	1070	BW
GL	QASIGIANNGUIT	4566	20160521	20160905	14	64.15975	-51.35744	767	-2326	BS
GL	QASIGIANNGUIT	4566	20150907	20160521	3	64.16136	-51.35493	738	709	BW
GL	QASIGIANNGUIT	4566	20160521	20160905	13	64.16136	-51.35493	738	-2678	BS
GL	QASIGIANNGUIT	4566	20160521	20160905	20	64.16055	-51.36148	722	-3531	BS
GL	QASIGIANNGUIT	4566	20150907	20160521	10	64.16055	-51.36148	722	334	BW
GL	QASIGIANNGUIT	4566	20150907	20160521	2	64.1623	-51.35862	714	320	BW
GL	QASIGIANNGUIT	4566	20160521	20160905	12	64.1623	-51.35862	714	-3055	BS
GL	QASIGIANNGUIT	4566	20160521	20160905	11	64.16393	-51.35772	692	-2954	BS
GL	QASIGIANNGUIT	4566	20150907	20160521	1	64.16393	-51.35772	692	479	BW
GL	QASIGIANNGUIT	4566	20160905	20170407	8	64.1556	-51.35555	941	858	BW
GL	QASIGIANNGUIT	4566	20170407	20170911	21	64.1556	-51.35555	941	-451	BS
GL	QASIGIANNGUIT	4566	20170407	20170911	20	64.1556	-51.35555	941	220	BS
GL	QASIGIANNGUIT	4566	20170407	20170911	19	64.15669	-51.35486	914	-881	BS
GL	QASIGIANNGUIT	4566	20160905	20170407	7	64.15669	-51.35486	914	1021	BW
GL	QASIGIANNGUIT	4566	20160905	20170407	10	64.15643	-51.35988	890	1118	BW
GL	QASIGIANNGUIT	4566	20170407	20170911	18	64.15763	-51.35488	890	-1073	BS
GL	QASIGIANNGUIT	4566	20160905	20170407	6	64.15763	-51.35488	890	983	BW
GL	QASIGIANNGUIT	4566	20170407	20170911	23	64.15643	-51.35988	890	-302	BS
GL	QASIGIANNGUIT	4566	20160905	20170407	9	64.158	-51.35212	885	840	BW
GL	QASIGIANNGUIT	4566	20170407	20170911	22	64.158	-51.35212	885	-691	BS
GL	QASIGIANNGUIT	4566	20170407	20170911	17	64.15975	-51.35744	767	-1336	BS
GL	QASIGIANNGUIT	4566	20160905	20170407	5	64.15975	-51.35744	767	1234	BW
GL	QASIGIANNGUIT	4566	20160905	20170407	14	64.16136	-51.35493	738	1130	BW
GL	QASIGIANNGUIT	4566	20170407	20170911	26	64.16136	-51.35493	738	-1643	BS
GL	QASIGIANNGUIT	4566	20160905	20170407	3	64.16136	-51.35493	738	1130	BW
GL	QASIGIANNGUIT	4566	20170407	20170911	25	64.16106	-51.35814	729	-1414	BS
GL	QASIGIANNGUIT	4566	20160905	20170407	4	64.16106	-51.35814	729	1032	BW
GL	QASIGIANNGUIT	4566	20160905	20170407	13	64.16106	-51.35814	729	1032	BW
GL	QASIGIANNGUIT	4566	20170407	20170911	24	64.16055	-51.36148	722	-1822	BS
GL	QASIGIANNGUIT	4566	20160905	20170407	11	64.16055	-51.36148	722	973	BW
GL	QASIGIANNGUIT	4566	20170407	20170911	16	64.1623	-51.35862	714	-2022	BS
GL	QASIGIANNGUIT	4566	20160905	20170407	2	64.1623	-51.35862	714	869	BW
GL	QASIGIANNGUIT	4566	20160905	20170407	1	64.16393	-51.35772	692	1162	BW
GL	QASIGIANNGUIT	4566	20170407	20170911	15	64.16393	-51.35772	692	-937	BS
GL	QASIGIANNGUIT	4566	20160905	20170407	12	64.16393	-51.35772	692	1162	BW
IT - Italy										
IT	CALDERONE	1107	20150912	20160915	2	42.47197	13.56651	2798	86	BA
IT	CALDERONE	1107	20150912	20160915	1	42.47372	13.56833	2658	-1127	BA
IT	CALDERONE	1107	20160915	20170909	2	42.47197	13.56651	2798	-391	BA
IT	CALDERONE	1107	20160915	20170909	1	42.47372	13.56833	2658	-203	BA
IT	CARESER	635	20150919	20160526	5B	46.4579	10.708	3161	790	BW
IT	CARESER	635	20160526	20160925	10D	46.45	10.6888	3146	-2505	BS
IT	CARESER	635	20150919	20160526	10D	46.45	10.6888	3146	927	BW
IT	CARESER	635	20150919	20160925	10D	46.45	10.6888	3146	-1578	BA
IT	CARESER	635	20150919	20160526	9C	46.4486	10.6878	3130	850	BW
IT	CARESER	635	20160526	20160925	9C	46.4486	10.6878	3130	-2512	BS
IT	CARESER	635	20150919	20160925	9C	46.4486	10.6878	3130	-1661	BA
IT	CARESER	635	20150919	20160526	9D	46.4479	10.6888	3116	871	BW
IT	CARESER	635	20150919	20160925	9D	46.4479	10.6888	3116	-2008	BA
IT	CARESER	635	20160526	20160925	9D	46.4479	10.6888	3116	-2879	BS
IT	CARESER	635	20150919	20160526	5L	46.4554	10.7154	3092	923	BW
IT	CARESER	635	20150919	20160925	5L	46.4554	10.7154	3092	-1582	BA
IT	CARESER	635	20160526	20160925	5L	46.4554	10.7154	3092	-2506	BS
IT	CARESER	635	20150919	20160925	7B	46.4493	10.7233	3083	-1203	BA
IT	CARESER	635	20150919	20160526	7B	46.4493	10.7233	3083	1013	BW
IT	CARESER	635	20160526	20160925	7B	46.4493	10.7233	3083	-2216	BS
IT	CARESER	635	20160526	20160925	6A	46.4539	10.7211	3077	-2263	BS
IT	CARESER	635	20150919	20160526	6A	46.4539	10.7211	3077	932	BW
IT	CARESER	635	20150919	20160925	6A	46.4539	10.7211	3077	-1332	BA
IT	CARESER	635	20150919	20160526	6L	46.4513	10.7214	3070	915	BW
IT	CARESER	635	20160526	20160925	13B	46.4533	10.6981	3060	-3309	BS
IT	CARESER	635	20150919	20160925	13B	46.4533	10.6981	3060	-2438	BA
IT	CARESER	635	20150919	20160526	13B	46.4533	10.6981	3060	871	BW
IT	CARESER	635	20160526	20160925	3B	46.452	10.7169	3052	-2814	BS
IT	CARESER	635	20150919	20160526	3B	46.452	10.7169	3052	993	BW
IT	CARESER	635	20150919	20160925	3B	46.452	10.7169	3052	-1821	BA
IT	CARESER	635	20160526	20160925	7A	46.4487	10.7186	3039	-2651	BS
IT	CARESER	635	20150919	20160925	7A	46.4487	10.7186	3039	-1760	BA
IT	CARESER	635	20150919	20160526	7A	46.4487	10.7186	3039	891	BW
IT	CARESER	635	20150919	20160526	8F	46.4498	10.7154	3008	786	BW
IT	CARESER	635	20160526	20160925	8F	46.4498	10.7154	3008	-3288	BS
IT	CARESER	635	20150919	20160925	8F	46.4498	10.7154	3008	-2502	BA
IT	CARESER	635	20150919	20160526	8E	46.45	10.7148	3002	762	BW
IT	CARESER	635	20150919	20160925	2D	46.4507	10.71	2965	-3037	BA
IT	CARESER	635	20160526	20160925	2D	46.4507	10.71	2965	-3775	BS
IT	CARESER	635	20150919	20160526	2D	46.4507	10.71	2965	738	BW
IT	CARESER	635	20150919	20160526	9E	46.4476	10.7007	2953	718	BW
IT	CARESER	635	20160526	20160925	9E	46.4476	10.7007	2953	-3620	BS
IT	CARESER	635	20150919	20160925	9E	46.4476	10.7007	2953	-2903	BA
IT	CARESER	635	20170523	20170914	10D	46.45	10.6888	3146	-3030	BS
IT	CARESER	635	20160925	20170523	10D	46.45	10.6888	3146	695	BW
IT	CARESER	635	20160925	20170914	10D	46.45	10.6888	3146	-2335	BA
IT	CARESER	635	20170523	20170914	9C	46.4486	10.6878	3130	-3393	BS
IT	CARESER	635	20160925	20170914	9C	46.4486	10.6878	3130	-2750	BA
IT	CARESER	635	20160925	20170523	9C	46.4486	10.6878	3130	643	BW

PU	GLACIER_NAME	WGMS_ID	FROM	TO	POINT_ID	LAT	LON	ELEV	MB	MB_CODE
IT	CARESER	635	20170523	20170914	5L	46.4554	10.7154	3092	-3097	BS
IT	CARESER	635	20160925	20170914	5L	46.4554	10.7154	3092	-2546	BA
IT	CARESER	635	20160925	20170523	5L	46.4554	10.7154	3092	551	BW
IT	CARESER	635	20170523	20170914	7B	46.4493	10.7233	3083	-2634	BS
IT	CARESER	635	20160925	20170914	7B	46.4493	10.7233	3083	-1899	BA
IT	CARESER	635	20160925	20170523	7B	46.4493	10.7233	3083	735	BW
IT	CARESER	635	20160925	20170523	6A	46.4539	10.7211	3077	588	BW
IT	CARESER	635	20160925	20170914	6A	46.4539	10.7211	3077	-2540	BA
IT	CARESER	635	20170523	20170914	6A	46.4539	10.7211	3077	-3129	BS
IT	CARESER	635	20160925	20170523	6L	46.4513	10.7214	3070	588	BW
IT	CARESER	635	20170523	20170914	13B	46.4533	10.6981	3060	-4182	BS
IT	CARESER	635	20160925	20170914	13B	46.4533	10.6981	3060	-3656	BA
IT	CARESER	635	20160925	20170523	13B	46.4533	10.6981	3060	526	BW
IT	CARESER	635	20160925	20170523	3B	46.452	10.7169	3052	625	BW
IT	CARESER	635	20160925	20170523	7A	46.4487	10.7186	3039	596	BW
IT	CARESER	635	20160925	20170914	7A	46.4487	10.7186	3039	-2895	BA
IT	CARESER	635	20170523	20170914	7A	46.4487	10.7186	3039	-3491	BS
IT	CARESER	635	20160925	20170914	8F	46.4498	10.7154	3008	-3757	BA
IT	CARESER	635	20170523	20170914	8F	46.4498	10.7154	3008	-4253	BS
IT	CARESER	635	20160925	20170523	8F	46.4498	10.7154	3008	496	BW
IT	CARESER	635	20160925	20170914	2D	46.4507	10.71	2965	-4256	BA
IT	CARESER	635	20170523	20170914	2D	46.4507	10.71	2965	-4624	BS
IT	CARESER	635	20160925	20170523	2D	46.4507	10.71	2965	368	BW
IT	CARESER	635	20170523	20170914	9E	46.4476	10.7007	2953	-4803	BS
IT	CARESER	635	20160925	20170523	9E	46.4476	10.7007	2953	496	BW
IT	CARESER	635	20160925	20170914	9E	46.4476	10.7007	2953	-4307	BA
IT	FONTANA BIANCA / WEISSBRUNNF.	1507	20150922	20160914	01. Jul	46.48286	10.76956	3219	-977	BA
IT	FONTANA BIANCA / WEISSBRUNNF.	1507	20150922	20160914	03. Jul	46.48805	10.76848	3205	-1843	BA
IT	FONTANA BIANCA / WEISSBRUNNF.	1507	20150922	20160914	02. Jul	46.4858	10.76859	3193	-1246	BA
IT	FONTANA BIANCA / WEISSBRUNNF.	1507	20150922	20160914	08. Okt	46.48288	10.7715	3168	-1444	BA
IT	FONTANA BIANCA / WEISSBRUNNF.	1507	20150922	20160914	16. Jul	46.48464	10.77061	3157	-1715	BA
IT	FONTANA BIANCA / WEISSBRUNNF.	1507	20150922	20160914	21. Jul	46.48153	10.77359	3120	-1749	BA
IT	FONTANA BIANCA / WEISSBRUNNF.	1507	20150922	20160914	Sep 20	46.48443	10.77276	3112	-1453	BA
IT	FONTANA BIANCA / WEISSBRUNNF.	1507	20150922	20160914	01. Sep	46.48557	10.77175	3109	-1530	BA
IT	FONTANA BIANCA / WEISSBRUNNF.	1507	20150922	20160914	06. Sep	46.48196	10.7746	3077	-1406	BA
IT	FONTANA BIANCA / WEISSBRUNNF.	1507	20150922	20160914	10. Sep	46.48569	10.77387	3061	-1540	BA
IT	FONTANA BIANCA / WEISSBRUNNF.	1507	20150922	20160914	23. Nov	46.48554	10.77456	3047	-1461	BA
IT	FONTANA BIANCA / WEISSBRUNNF.	1507	20150922	20160914	22. Okt	46.4853	10.7754	3030	-1379	BA
IT	FONTANA BIANCA / WEISSBRUNNF.	1507	20150922	20160914	20/13	46.4819	10.77634	3020	-1570	BA
IT	FONTANA BIANCA / WEISSBRUNNF.	1507	20150922	20160914	Aug 20	46.48574	10.77605	3013	-1335	BA
IT	FONTANA BIANCA / WEISSBRUNNF.	1507	20150922	20160914	01. Nov	46.48209	10.77703	2996	-1539	BA
IT	FONTANA BIANCA / WEISSBRUNNF.	1507	20150922	20160914	14. Jul	46.48231	10.77849	2943	-954	BA
IT	FONTANA BIANCA / WEISSBRUNNF.	1507	20160914	20170921	Jul 20	46.48286	10.76956	3219	-1714	BA
IT	FONTANA BIANCA / WEISSBRUNNF.	1507	20160914	20170921	01. Mär	46.48805	10.76848	3205	-1587	BA
IT	FONTANA BIANCA / WEISSBRUNNF.	1507	20160914	20170921	Jul 20	46.4858	10.76859	3193	-2001	BA
IT	FONTANA BIANCA / WEISSBRUNNF.	1507	20160914	20170921	01. Aug	46.48288	10.7715	3168	-1579	BA
IT	FONTANA BIANCA / WEISSBRUNNF.	1507	20160914	20170921	16. Jul	46.48464	10.77061	3157	-1605	BA
IT	FONTANA BIANCA / WEISSBRUNNF.	1507	20160914	20170921	Jul 20	46.48153	10.77359	3120	-2487	BA
IT	FONTANA BIANCA / WEISSBRUNNF.	1507	20160914	20170921	01. Jul	46.48443	10.77276	3112	-2032	BA
IT	FONTANA BIANCA / WEISSBRUNNF.	1507	20160914	20170921	Sep 20	46.48196	10.7746	3077	-2427	BA
IT	FONTANA BIANCA / WEISSBRUNNF.	1507	20160914	20170921	01. Okt	46.48569	10.77387	3061	-2298	BA
IT	FONTANA BIANCA / WEISSBRUNNF.	1507	20160914	20170921	23. Nov	46.48554	10.77456	3047	-2134	BA
IT	FONTANA BIANCA / WEISSBRUNNF.	1507	20160914	20170921	22/17	46.4853	10.7754	3030	-2431	BA
IT	FONTANA BIANCA / WEISSBRUNNF.	1507	20160914	20170921	20/13	46.4819	10.77634	3020	-2617	BA
IT	FONTANA BIANCA / WEISSBRUNNF.	1507	20160914	20170921	Nov 13	46.48209	10.77703	2996	-2393	BA
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160430	LGF26/05	46.4578	10.6118	3450	713	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160430	b2	46.4587	10.6111	3372	589	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160930	LGF25/11	46.459	10.6101	3363	-528	BA
IT	LUNGA (VEDRETTA) / LANGENF.	661	20160501	20160930	LGF25/11	46.459	10.6101	3363	-1071	BS
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160430	LGF25/11	46.459	10.6101	3362	544	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160430	b3	46.4598	10.6106	3352	657	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160430	b4	46.4602	10.6122	3343	1399	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160430	r2	46.4599	10.6092	3343	730	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160430	b5	46.4608	10.6105	3329	1075	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160430	b6	46.461	10.6122	3323	991	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160430	r3	46.4608	10.6088	3309	725	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160430	b7	46.4616	10.6098	3297	941	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160430	b8	46.4621	10.6115	3291	1248	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160930	LGF23/05	46.4625	10.6133	3290	75	BA
IT	LUNGA (VEDRETTA) / LANGENF.	661	20160501	20160930	LGF23/05	46.4625	10.6133	3290	-847	BS
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160430	LGF23/05	46.4625	10.6133	3287	922	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160430	b13	46.4631	10.6146	3283	708	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160430	r4	46.4616	10.608	3282	1065	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160430	b14	46.4639	10.6155	3282	716	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160430	LGF31/09	46.461	10.6045	3279	1047	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160430	r5	46.461	10.6063	3279	815	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160430	b15	46.4638	10.6135	3274	834	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160430	b12	46.4633	10.612	3272	1019	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160930	WP 57	46.4619	10.6077	3271	27	BA
IT	LUNGA (VEDRETTA) / LANGENF.	661	20160501	20160930	LGF24/05	46.4624	10.6085	3266	-799	BS
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160930	LGF24/05	46.4624	10.6085	3266	284	BA
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160430	b11	46.463	10.6102	3263	1061	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160430	LGF24/05	46.4624	10.6085	3263	1083	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160430	WS1/16	46.4624	10.6085	3263	1083	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160430	LGF30/09	46.4642	10.6115	3259	835	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160430	r7	46.4619	10.6061	3249	799	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160430	r8	46.4622	10.6049	3245	929	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160430	LGF32/09	46.4647	10.6023	3239	1536	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160430	b17	46.4642	10.6092	3238	678	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160930	AWS	46.4642	10.6091	3234	-448	BA
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160430	r9	46.4631	10.6038	3234	1073	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160430	r10	46.4634	10.6059	3229	1013	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160430	r14	46.4659	10.603	3228	1222	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160430	b18	46.4636	10.6076	3228	971	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160430	b19	46.4651	10.6106	3228	546	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20160501	20160930	LGF32/09	46.4647	10.6023	3226	-3119	BS

PU	GLACIER_NAME	WGMS_ID	FROM	TO	POINT_ID	LAT	LON	ELEV	MB	MB_CODE
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160930	LGF32/09	46.4647	10.6023	3226	-1583	BA
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160430	LGF21/15	46.4651	10.6085	3222	664	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160930	LGF21/15	46.4653	10.6082	3221	-904	BA
IT	LUNGA (VEDRETTA) / LANGENF.	661	20160501	20160930	LGF21/15	46.4653	10.6082	3221	-1568	BS
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160430	LGF22/11	46.4641	10.6048	3221	904	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160930	LGF22/11	46.4642	10.6048	3221	-362	BA
IT	LUNGA (VEDRETTA) / LANGENF.	661	20160501	20160930	LGF22/11	46.4642	10.6048	3221	-1266	BS
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160430	b21	46.4646	10.6068	3220	970	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160430	r15	46.4669	10.6036	3210	1721	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160430	r12	46.465	10.6038	3208	821	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160430	b22	46.4652	10.6055	3207	868	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160430	b23	46.4661	10.6045	3191	971	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160430	b24	46.4664	10.6069	3183	596	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160430	b25	46.4666	10.6085	3170	606	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160430	LGF20/09	46.467	10.6053	3168	1066	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20160501	20160930	LGF20/09	46.4672	10.6055	3160	-1630	BS
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160930	LGF20/09	46.4672	10.6055	3160	-564	BA
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160430	LGF20/15	46.4672	10.6065	3158	592	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20160501	20160930	LGF20/15	46.4673	10.6066	3152	-1827	BS
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160930	LGF20/15	46.4673	10.6066	3152	-1235	BA
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160430	b36	46.4726	10.6055	3142	1437	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160430	b35	46.4715	10.605	3140	1356	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160430	LGF34/11	46.4681	10.6066	3137	1077	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20160501	20160930	LGF34/11	46.4683	10.6067	3135	-1960	BS
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160930	LGF34/11	46.4683	10.6067	3135	-883	BA
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160430	r19	46.4693	10.6048	3128	1058	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160430	b29	46.4678	10.6087	3119	1137	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160430	LGF33/09	46.473	10.6063	3118	1494	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160430	b34	46.4707	10.6056	3112	1214	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160930	WP 73	46.4673	10.61	3111	634	BA
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160430	LGF29/09	46.4695	10.6058	3111	862	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160930	WP 72	46.4682	10.6086	3105	209	BA
IT	LUNGA (VEDRETTA) / LANGENF.	661	20160501	20160930	LGF29/09	46.4696	10.6059	3101	-1737	BS
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160930	LGF29/09	46.4696	10.6059	3101	-875	BA
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160430	r21	46.469	10.6077	3101	748	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160430	b38	46.4738	10.607	3098	1437	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20160501	20160930	LGF18/09	46.4713	10.6073	3087	-1338	BS
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160430	b205	46.4675	10.6106	3087	1445	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160430	LGF18/09	46.4713	10.6073	3087	853	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160930	LGF18/09	46.4713	10.6073	3087	-485	BA
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160430	WS2/16	46.4702	10.6072	3083	945	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160430	b206	46.4675	10.6123	3082	892	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160430	b39	46.4725	10.6076	3081	1360	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20160501	20160930	LGF16/15	46.47	10.6088	3080	-2142	BS
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160930	LGF16/15	46.47	10.6088	3080	-1487	BA
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160430	LGF16/15	46.47	10.6087	3078	655	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160430	b32	46.4688	10.6098	3073	903	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160430	r24	46.4712	10.6086	3068	987	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160930	LGF17/15	46.4689	10.611	3067	-2029	BA
IT	LUNGA (VEDRETTA) / LANGENF.	661	20160501	20160930	LGF17/15	46.4689	10.611	3067	-2500	BS
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160430	b40	46.4733	10.6082	3064	1204	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160430	b207	46.4683	10.6121	3060	545	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160430	r25	46.4707	10.6098	3059	762	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160930	LGF13a/11	46.4717	10.6097	3056	-934	BA
IT	LUNGA (VEDRETTA) / LANGENF.	661	20160501	20160930	LGF13a/11	46.4717	10.6097	3056	-1731	BS
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160430	LGF13a/11	46.4716	10.6097	3052	798	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160430	LGF17/15	46.4688	10.6109	3051	471	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20160501	20160930	LGF15/15	46.4728	10.6093	3044	-1878	BS
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160930	LGF15/15	46.4728	10.6093	3044	-717	BA
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160430	LGF15/15	46.4728	10.6094	3043	1161	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160430	b42	46.4723	10.6103	3037	995	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160430	b43	46.4736	10.6105	3019	1427	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160430	r27	46.471	10.6115	3011	1380	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160430	b44	46.4722	10.6115	3008	1156	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20160501	20160930	LGF27/15	46.473	10.6114	3005	-2528	BS
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160930	LGF27/15	46.473	10.6114	3005	-1368	BA
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160430	LGF27/15	46.473	10.6114	3003	1160	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160430	b46	46.4736	10.6122	2982	1216	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160430	b47	46.4728	10.6128	2970	921	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160430	r28	46.4706	10.613	2967	1003	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160430	LGF14/15	46.4734	10.6132	2960	1209	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20160501	20160930	LGF14/15	46.4734	10.6131	2947	-2964	BS
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160930	LGF14/15	46.4734	10.6131	2947	-1756	BA
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160430	r29	46.4701	10.6145	2943	789	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160430	b49	46.473	10.614	2939	1385	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160430	r30	46.4695	10.6161	2933	884	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160430	LGF35/15	46.4712	10.6138	2929	998	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160930	LGF35/15	46.4712	10.6139	2921	-1705	BA
IT	LUNGA (VEDRETTA) / LANGENF.	661	20160501	20160930	LGF35/15	46.4712	10.6139	2921	-2703	BS
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160430	r31	46.4704	10.6156	2912	833	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160430	WS3/16	46.4712	10.6155	2902	770	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160430	LGF12/15	46.4712	10.6155	2902	770	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20160501	20160930	LGF12/15	46.4712	10.6156	2900	-3180	BS
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160930	LGF12/15	46.4712	10.6156	2900	-2410	BA
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160430	r34	46.4698	10.6177	2886	1063	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160430	LGF28/15	46.4719	10.6168	2880	1207	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160430	LGF11/15	46.4706	10.6173	2878	863	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20160501	20160930	LGF28/12	46.4719	10.6169	2865	-3529	BS
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160930	LGF28/12	46.4719	10.6169	2865	-2322	BA
IT	LUNGA (VEDRETTA) / LANGENF.	661	20160501	20160930	LGF11/15	46.4707	10.6175	2861	-3579	BS
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160930	LGF11/15	46.4707	10.6175	2861	-2716	BA
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160430	b51	46.4714	10.6179	2859	892	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160430	r36	46.4701	10.619	2855	1084	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160430	r37	46.4708	10.6186	2851	792	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160430	LGF9/15	46.4714	10.6191	2829	924	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160430	b53	46.4722	10.6186	2822	1190	BW

PU	GLACIER_NAME	WGMS_ID	FROM	TO	POINT_ID	LAT	LON	ELEV	MB	MB_CODE
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160430	r38	46.4706	10.6201	2821	1117	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20160501	20160930	LGF09/15	46.4715	10.6191	2817	-3951	BS
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160930	LGF09/15	46.4715	10.6191	2817	-3027	BA
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160430	LGF8/15	46.4713	10.6205	2802	1266	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160430	b54	46.4721	10.6203	2788	1050	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160430	LGF10/15	46.4727	10.6196	2782	1043	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160930	LGF08/15	46.4715	10.6206	2780	-3288	BA
IT	LUNGA (VEDRETTA) / LANGENF.	661	20160501	20160930	LGF08/15	46.4715	10.6206	2780	-4554	BS
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160930	LGF10/15	46.4728	10.6195	2773	-2436	BA
IT	LUNGA (VEDRETTA) / LANGENF.	661	20160501	20160930	LGF10/15	46.4728	10.6195	2773	-3479	BS
IT	LUNGA (VEDRETTA) / LANGENF.	661	20160501	20160930	LGF07/16	46.4724	10.6209	2761	-4550	BS
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160430	r40	46.4719	10.6219	2761	1190	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160930	LGF07/16	46.4724	10.6209	2761	-3639	BA
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160430	LGF7/15	46.4725	10.6209	2759	911	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160430	b57	46.4734	10.6209	2750	931	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160430	b58	46.4728	10.6221	2737	1063	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160430	b59	46.4733	10.6223	2735	1013	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160430	r41	46.4723	10.623	2735	856	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160430	LGF6/15	46.4729	10.6228	2730	968	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160430	WS4/16	46.4729	10.6228	2730	968	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160430	b60	46.4732	10.6234	2724	1140	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20160501	20160930	LGF06/16	46.4728	10.6227	2721	-5057	BS
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160930	LGF06/16	46.4728	10.6227	2721	-4089	BA
IT	LUNGA (VEDRETTA) / LANGENF.	661	20151001	20160430	r42	46.4728	10.6238	2720	1209	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170430	SH29	46.4578	10.6118	3450	364	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170430	SH28	46.4587	10.6111	3372	369	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170430	LGF25/11	46.459	10.6101	3363	497	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170930	LGF25/11	46.4591	10.6101	3360	-1862	BA
IT	LUNGA (VEDRETTA) / LANGENF.	661	20170501	20170930	LGF25/11	46.4591	10.6101	3360	-2359	BS
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170430	SH27	46.4598	10.6106	3352	560	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170430	SH1	46.4599	10.6093	3335	461	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170430	SH26	46.461	10.6122	3323	679	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170430	SH2	46.4609	10.6088	3300	592	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170430	SH24	46.462	10.6112	3292	975	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20170501	20170930	LGF23/05	46.4625	10.6133	3288	-1652	BS
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170930	LGF23/05	46.4625	10.6133	3288	-847	BA
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170430	LGF23/05	46.4625	10.6133	3287	805	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170430	SH25	46.4615	10.6096	3287	712	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170430	SH22	46.4631	10.6146	3283	540	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170430	SH23	46.4639	10.6155	3282	735	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20170501	20170930	LGF31/09	46.4611	10.6045	3280	-1490	BS
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170930	LGF31/09	46.4611	10.6045	3280	-899	BA
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170430	SH4	46.4611	10.6063	3277	622	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170430	LGF31/09	46.4611	10.6045	3275	592	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170430	SH3	46.4616	10.6079	3273	807	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170430	SH30	46.4633	10.612	3272	983	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170930	LGF24/05	46.4624	10.6085	3266	-875	BA
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170430	SH31	46.463	10.6102	3263	799	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170430	WS1/17	46.4624	10.6085	3263	656	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20170501	20170930	LGF30/09	46.4642	10.6114	3259	-1842	BS
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170430	LGF30/09	46.4642	10.6115	3259	376	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170930	LGF30/09	46.4642	10.6114	3259	-1465	BA
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170430	LGF32/09	46.4647	10.6023	3245	910	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170430	SH5	46.4619	10.6061	3245	608	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20170501	20170930	LGF32/09	46.4647	10.6022	3245	-3385	BS
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170930	LGF32/09	46.4647	10.6022	3245	-2474	BA
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170430	SH6	46.4622	10.6049	3242	682	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170430	LGF/AWS	46.4642	10.6091	3238	472	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170430	SH10	46.4659	10.6029	3238	706	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170430	SH7	46.4631	10.6038	3232	825	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170430	SH8	46.4634	10.6059	3228	680	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170430	SH32	46.4651	10.6106	3228	483	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170430	LGF21/15	46.4653	10.6082	3222	384	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170430	SH33	46.4646	10.6068	3220	600	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170430	LGF22/11	46.4642	10.6048	3219	665	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20170501	20170930	LGF21/15	46.4653	10.6082	3216	-2784	BS
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170930	LGF22/11	46.4642	10.6048	3216	-1808	BA
IT	LUNGA (VEDRETTA) / LANGENF.	661	20170501	20170930	LGF22/11	46.4642	10.6048	3216	-2473	BS
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170930	LGF21/15	46.4653	10.6082	3216	-2400	BA
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170430	SH9	46.4651	10.6038	3211	753	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170430	SH34	46.4652	10.6055	3207	508	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170430	SH11	46.4669	10.6034	3196	1111	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170430	SH35	46.4661	10.6045	3191	722	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170430	SH36	46.4664	10.6069	3183	616	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170430	SH37	46.4666	10.6087	3178	570	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170430	LGF20/09	46.4672	10.6056	3168	651	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170930	LGF20/09	46.4673	10.6056	3163	-1885	BA
IT	LUNGA (VEDRETTA) / LANGENF.	661	20170501	20170930	LGF20/09	46.4673	10.6056	3163	-2537	BS
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170430	SH12	46.4682	10.6047	3152	575	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170930	LGF20/15	46.4674	10.6067	3148	-2764	BA
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170430	SH44	46.4726	10.6055	3142	1065	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170430	SH43	46.4715	10.605	3140	1069	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170430	LGF34/11	46.4683	10.6068	3124	565	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170430	SH13	46.4694	10.6049	3119	824	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170430	SH38	46.4678	10.6087	3119	954	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170930	LGF34/11	46.4683	10.6068	3118	-2267	BA
IT	LUNGA (VEDRETTA) / LANGENF.	661	20170501	20170930	LGF34/11	46.4683	10.6068	3118	-2831	BS
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170430	LGF33/09	46.473	10.6063	3118	969	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20170501	20170930	LGF33/09	46.4728	10.6063	3117	-1976	BS
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170430	SH17	46.471	10.6134	3117	497	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170930	LGF33/09	46.4728	10.6063	3117	-1007	BA
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170430	SH42	46.4707	10.6056	3112	817	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170430	SH18	46.4704	10.6146	3107	384	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170430	LGF29/09	46.4696	10.6059	3107	685	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170930	LGF29/09	46.4696	10.606	3105	-2236	BA
IT	LUNGA (VEDRETTA) / LANGENF.	661	20170501	20170930	LGF29/09	46.4696	10.606	3105	-2922	BS

PU	GLACIER_NAME	WGMS_ID	FROM	TO	POINT_ID	LAT	LON	ELEV	MB	MB_CODE
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170430	SH14	46.469	10.6077	3102	509	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170430	SH45	46.4738	10.607	3098	1002	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170430	SH19	46.4701	10.6157	3091	648	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170430	LGF18/09	46.4713	10.6073	3084	929	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170430	WS2/17	46.4702	10.6072	3082	727	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170430	SH46	46.4725	10.6076	3081	967	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20170501	20170930	LGF18/09	46.4713	10.6073	3079	-2993	BS
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170930	LGF18/09	46.4713	10.6073	3079	-2064	BA
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170430	LGF16/15	46.47	10.6088	3078	516	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170430	SH39	46.4682	10.6105	3077	957	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170430	SH41	46.4688	10.6098	3073	670	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170430	SH15	46.4712	10.6086	3070	765	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20170501	20170930	LGF16/15	46.47	10.6089	3068	-3390	BS
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170930	LGF16/15	46.47	10.6089	3068	-2874	BA
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170430	SH47	46.4733	10.6082	3064	923	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170430	LGF13a/11	46.4718	10.6095	3062	802	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170430	SH16	46.4707	10.6098	3060	520	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170930	LGF17/15	46.4689	10.6111	3057	-3530	BA
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170930	LGF13a/11	46.4717	10.6097	3053	-2428	BA
IT	LUNGA (VEDRETTA) / LANGENF.	661	20170501	20170930	LGF13a/11	46.4717	10.6097	3053	-3230	BS
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170430	LGF15/15	46.4728	10.6093	3043	944	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170430	SH48	46.4723	10.6103	3037	824	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20170501	20170930	LGF15/15	46.4728	10.6094	3031	-2862	BS
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170930	LGF15/15	46.4728	10.6094	3031	-1918	BA
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170430	SH21	46.4705	10.6192	3013	452	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170430	SH49	46.4722	10.6115	3008	798	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170430	LGF27/15	46.473	10.6114	3003	864	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170930	LGF27/15	46.473	10.6114	2997	-2627	BA
IT	LUNGA (VEDRETTA) / LANGENF.	661	20170501	20170930	LGF27/15	46.473	10.6114	2997	-3491	BS
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170430	SH50	46.4736	10.6122	2982	945	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170430	SH51	46.4728	10.6128	2970	852	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170430	LGF14/15	46.4735	10.6131	2960	964	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170930	LGF14/15	46.4734	10.6132	2951	-3265	BA
IT	LUNGA (VEDRETTA) / LANGENF.	661	20170501	20170930	LGF14/15	46.4734	10.6132	2951	-4229	BS
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170930	LGF35/15	46.4712	10.6138	2938	-2758	BA
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170430	WS3/17	46.4712	10.6155	2900	691	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170930	LGF12/15	46.4712	10.6157	2899	-3847	BA
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170430	LGF28/15	46.4719	10.6169	2880	1129	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170930	LGF11/15	46.4707	10.6176	2875	-3914	BA
IT	LUNGA (VEDRETTA) / LANGENF.	661	20170501	20170930	LGF28/12	46.4719	10.6169	2865	-4250	BS
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170930	LGF28/12	46.4719	10.6169	2865	-3121	BA
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170430	SH52	46.4714	10.6179	2859	683	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170430	SH20	46.4702	10.6184	2852	657	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170430	SH53	46.4709	10.6185	2847	632	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170430	LGF09/15	46.4715	10.6191	2829	713	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170930	LGF09/15	46.4715	10.6191	2824	-4339	BA
IT	LUNGA (VEDRETTA) / LANGENF.	661	20170501	20170930	LGF09/15	46.4715	10.6191	2824	-5052	BS
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170430	SH54	46.4722	10.6186	2822	873	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170430	LGF08/15	46.4715	10.6206	2802	929	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170930	LGF08/15	46.4714	10.6206	2789	-4502	BA
IT	LUNGA (VEDRETTA) / LANGENF.	661	20170501	20170930	LGF08/15	46.4714	10.6206	2789	-5431	BS
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170430	SH55	46.4721	10.6203	2788	754	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170430	LGF10/15	46.4728	10.6195	2782	825	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170930	LGF10/15	46.4728	10.6195	2771	-3605	BA
IT	LUNGA (VEDRETTA) / LANGENF.	661	20170501	20170930	LGF10/15	46.4728	10.6195	2771	-4429	BS
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170430	SH56	46.4719	10.6219	2761	1109	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170430	LGF07/16	46.4724	10.6209	2759	679	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170430	WS4/17	46.4723	10.6205	2757	769	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20170501	20170930	LGF07/16	46.4724	10.6209	2754	-5483	BS
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170930	LGF07/16	46.4724	10.6209	2754	-4804	BA
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170430	SH57	46.4734	10.6209	2750	741	BW
IT	LUNGA (VEDRETTA) / LANGENF.	661	20161001	20170430	LGF06/16	46.4725	10.6223	2731	798	BW
IT	MALAVALLE (VEDR. DI) / UEBELTALF.	672	20150927	20160914	P20	46.5713	11.0958	3403	144	BA
IT	MALAVALLE (VEDR. DI) / UEBELTALF.	672	20150927	20160914	P21	46.5705	11.0957	3357	-140	BA
IT	MALAVALLE (VEDR. DI) / UEBELTALF.	672	20150927	20160914	P16	46.5801	11.1115	3240	150	BA
IT	MALAVALLE (VEDR. DI) / UEBELTALF.	672	20150927	20160914	P15	46.5752	11.1106	3174	120	BA
IT	MALAVALLE (VEDR. DI) / UEBELTALF.	672	20150927	20160914	P22	46.5726	11.1018	3158	204	BA
IT	MALAVALLE (VEDR. DI) / UEBELTALF.	672	20150927	20160914	P24	46.5744	11.1031	3149	-560	BA
IT	MALAVALLE (VEDR. DI) / UEBELTALF.	672	20150927	20160914	P25	46.5737	11.1025	3131	-1044	BA
IT	MALAVALLE (VEDR. DI) / UEBELTALF.	672	20150927	20160914	P14	46.5747	11.1114	3131	-245	BA
IT	MALAVALLE (VEDR. DI) / UEBELTALF.	672	20150927	20160914	P23	46.5714	11.1031	3122	-294	BA
IT	MALAVALLE (VEDR. DI) / UEBELTALF.	672	20150927	20160914	P10	46.574	11.1054	3045	-805	BA
IT	MALAVALLE (VEDR. DI) / UEBELTALF.	672	20150927	20160914	P09	46.5731	11.1054	3030	-574	BA
IT	MALAVALLE (VEDR. DI) / UEBELTALF.	672	20150927	20160914	P08	46.5728	11.1057	3009	-1476	BA
IT	MALAVALLE (VEDR. DI) / UEBELTALF.	672	20150927	20160914	P07	46.5723	11.1101	2987	-1944	BA
IT	MALAVALLE (VEDR. DI) / UEBELTALF.	672	20150927	20160914	P19	46.5622	11.11	2985	-477	BA
IT	MALAVALLE (VEDR. DI) / UEBELTALF.	672	20150927	20160914	P18	46.5631	11.1059	2935	-810	BA
IT	MALAVALLE (VEDR. DI) / UEBELTALF.	672	20150927	20160914	P06	46.5705	11.1103	2892	-1458	BA
IT	MALAVALLE (VEDR. DI) / UEBELTALF.	672	20150927	20160914	P13	46.5613	11.113	2877	-900	BA
IT	MALAVALLE (VEDR. DI) / UEBELTALF.	672	20150927	20160914	P17	46.5641	11.1058	2877	-1035	BA
IT	MALAVALLE (VEDR. DI) / UEBELTALF.	672	20150927	20160914	P05	46.5659	11.1106	2850	-1503	BA
IT	MALAVALLE (VEDR. DI) / UEBELTALF.	672	20150927	20160914	P12	46.5624	11.1136	2826	-1332	BA
IT	MALAVALLE (VEDR. DI) / UEBELTALF.	672	20150927	20160914	P11	46.5636	11.1142	2768	-1125	BA
IT	MALAVALLE (VEDR. DI) / UEBELTALF.	672	20150927	20160914	P03	46.5646	11.1137	2760	-1899	BA
IT	MALAVALLE (VEDR. DI) / UEBELTALF.	672	20150927	20160914	P02	46.5649	11.1155	2710	-2340	BA
IT	MALAVALLE (VEDR. DI) / UEBELTALF.	672	20150927	20160914	P01	46.5657	11.1208	2660	-3042	BA
IT	MALAVALLE (VEDR. DI) / UEBELTALF.	672	20150927	20160914	P04	46.5655	11.1118	1812	-972	BA
IT	MALAVALLE (VEDR. DI) / UEBELTALF.	672	20160914	20170927	P20	46.5713	11.0958	3403	-47	BA
IT	MALAVALLE (VEDR. DI) / UEBELTALF.	672	20160914	20170927	P21	46.5705	11.0957	3357	-315	BA
IT	MALAVALLE (VEDR. DI) / UEBELTALF.	672	20160914	20170927	P16	46.5801	11.1115	3240	132	BA
IT	MALAVALLE (VEDR. DI) / UEBELTALF.	672	20160914	20170927	P15	46.5752	11.1106	3174	34	BA
IT	MALAVALLE (VEDR. DI) / UEBELTALF.	672	20160914	20170927	P22	46.5726	11.1018	3158	-426	BA
IT	MALAVALLE (VEDR. DI) / UEBELTALF.	672	20160914	20170927	P24	46.5744	11.1031	3149	-548	BA
IT	MALAVALLE (VEDR. DI) / UEBELTALF.	672	20160914	20170927	P14	46.5747	11.1114	3131	-1056	BA
IT	MALAVALLE (VEDR. DI) / UEBELTALF.	672	20160914	20170927	P25	46.5737	11.1025	3131	-2174	BA
IT	MALAVALLE (VEDR. DI) / UEBELTALF.	672	20160914	20170927	P23	46.5714	11.1031	3122	-833	BA

PU	GLACIER_NAME	WGMS_ID	FROM	TO	POINT_ID	LAT	LON	ELEV	MB	MB_CODE
IT	MALAVALLE (VEDR. DI) / UEBELTALF.	672	20160914	20170927	P10	46.574	11.1054	3045	-1345	BA
IT	MALAVALLE (VEDR. DI) / UEBELTALF.	672	20160914	20170927	P09	46.5731	11.1054	3030	-1039	BA
IT	MALAVALLE (VEDR. DI) / UEBELTALF.	672	20160914	20170927	P08	46.5728	11.1057	3009	-1816	BA
IT	MALAVALLE (VEDR. DI) / UEBELTALF.	672	20160914	20170927	P07	46.5723	11.1101	2987	-2052	BA
IT	MALAVALLE (VEDR. DI) / UEBELTALF.	672	20160914	20170927	P19	46.5622	11.11	2985	-1206	BA
IT	MALAVALLE (VEDR. DI) / UEBELTALF.	672	20160914	20170927	P18	46.5631	11.1059	2935	-1362	BA
IT	MALAVALLE (VEDR. DI) / UEBELTALF.	672	20160914	20170927	P06	46.5705	11.1103	2892	-798	BA
IT	MALAVALLE (VEDR. DI) / UEBELTALF.	672	20160914	20170927	P13	46.5613	11.113	2877	-1008	BA
IT	MALAVALLE (VEDR. DI) / UEBELTALF.	672	20160914	20170927	P17	46.5641	11.1058	2877	-1443	BA
IT	MALAVALLE (VEDR. DI) / UEBELTALF.	672	20160914	20170927	P05	46.5659	11.1106	2850	-2274	BA
IT	MALAVALLE (VEDR. DI) / UEBELTALF.	672	20160914	20170927	P12	46.5624	11.1136	2826	-1128	BA
IT	MALAVALLE (VEDR. DI) / UEBELTALF.	672	20160914	20170927	P11	46.5636	11.1142	2768	-1836	BA
IT	MALAVALLE (VEDR. DI) / UEBELTALF.	672	20160914	20170927	P03	46.5646	11.1137	2760	-1899	BA
IT	MALAVALLE (VEDR. DI) / UEBELTALF.	672	20160914	20170927	P02	46.5649	11.1155	2710	-2235	BA
IT	MALAVALLE (VEDR. DI) / UEBELTALF.	672	20160914	20170927	P01	46.5657	11.1208	2660	-2229	BA
IT	MALAVALLE (VEDR. DI) / UEBELTALF.	672	20160914	20170927	P04	46.5655	11.1118	1812	-1797	BA
IT	PENDENTE (VEDR.) / HANGENDERF.	675	20160915	20170927	P84	46.964	11.2159	2863	-630	BA
IT	PENDENTE (VEDR.) / HANGENDERF.	675	20160915	20170927	P49	46.9651	11.2176	2841	-630	BA
IT	PENDENTE (VEDR.) / HANGENDERF.	675	20160915	20170927	P86	46.966	11.238	2816	-840	BA
IT	PENDENTE (VEDR.) / HANGENDERF.	675	20160915	20170927	P76	46.9654	11.2325	2792	-1416	BA
IT	PENDENTE (VEDR.) / HANGENDERF.	675	20160915	20170927	P85	46.9665	11.2295	2760	-2289	BA
IT	PENDENTE (VEDR.) / HANGENDERF.	675	20160915	20170927	P50	46.966	11.2223	2756	-2364	BA
IT	PENDENTE (VEDR.) / HANGENDERF.	675	20160915	20170927	P81	46.9667	11.2248	2714	-1848	BA
IT	PENDENTE (VEDR.) / HANGENDERF.	675	20160915	20170927	P80	46.9647	11.2248	2680	-2241	BA
IT	PENDENTE (VEDR.) / HANGENDERF.	675	20160915	20170927	P79	46.963	11.2247	2655	-2226	BA
IT	RIES OCC. (VEDR. DI) / RIESERF. WESTL.	645	20151001	20160914	27. Sep	46.90036	12.0991	3159	126	BA
IT	RIES OCC. (VEDR. DI) / RIESERF. WESTL.	645	20151001	20160914	13. Aug	46.90169	12.09118	3147	-99	BA
IT	RIES OCC. (VEDR. DI) / RIESERF. WESTL.	645	20151001	20160914	26. Sep	46.90206	12.09427	3113	-83	BA
IT	RIES OCC. (VEDR. DI) / RIESERF. WESTL.	645	20151001	20160914	12. Aug	46.90263	12.09945	3105	-68	BA
IT	RIES OCC. (VEDR. DI) / RIESERF. WESTL.	645	20151001	20160914	09. Aug	46.90408	12.09674	3067	-1836	BA
IT	RIES OCC. (VEDR. DI) / RIESERF. WESTL.	645	20151001	20160914	14. Aug	46.90419	12.09323	3050	-722	BA
IT	RIES OCC. (VEDR. DI) / RIESERF. WESTL.	645	20151001	20160914	Aug 20	46.90334	12.10311	3045	-763	BA
IT	RIES OCC. (VEDR. DI) / RIESERF. WESTL.	645	20151001	20160914	01. Jul	46.9043	12.10075	3040	-689	BA
IT	RIES OCC. (VEDR. DI) / RIESERF. WESTL.	645	20151001	20160914	Aug 20	46.90555	12.10275	2980	-579	BA
IT	RIES OCC. (VEDR. DI) / RIESERF. WESTL.	645	20151001	20160914	Aug 15	46.90512	12.10523	2977	-792	BA
IT	RIES OCC. (VEDR. DI) / RIESERF. WESTL.	645	20151001	20160914	16/13	46.90594	12.0916	2975	-1003	BA
IT	RIES OCC. (VEDR. DI) / RIESERF. WESTL.	645	20151001	20160914	18. Aug	46.90957	12.09677	2931	-1681	BA
IT	RIES OCC. (VEDR. DI) / RIESERF. WESTL.	645	20151001	20160914	11. Dez	46.90643	12.10524	2923	-1148	BA
IT	RIES OCC. (VEDR. DI) / RIESERF. WESTL.	645	20151001	20160914	23. Dez	46.91049	12.09372	2914	-1484	BA
IT	RIES OCC. (VEDR. DI) / RIESERF. WESTL.	645	20151001	20160914	24/13	46.90914	12.09227	2910	-1343	BA
IT	RIES OCC. (VEDR. DI) / RIESERF. WESTL.	645	20151001	20160914	04. Aug	46.90743	12.10294	2898	-993	BA
IT	RIES OCC. (VEDR. DI) / RIESERF. WESTL.	645	20151001	20160914	17/13	46.9074	12.09589	2878	-812	BA
IT	RIES OCC. (VEDR. DI) / RIESERF. WESTL.	645	20151001	20160914	22/13	46.91158	12.09671	2870	-2023	BA
IT	RIES OCC. (VEDR. DI) / RIESERF. WESTL.	645	20151001	20160914	03. Dez	46.90843	12.1011	2865	-1406	BA
IT	RIES OCC. (VEDR. DI) / RIESERF. WESTL.	645	20151001	20160914	21/15	46.91444	12.09593	2828	-2531	BA
IT	RIES OCC. (VEDR. DI) / RIESERF. WESTL.	645	20151001	20160914	19. Aug	46.90779	12.09191	2812	-1002	BA
IT	RIES OCC. (VEDR. DI) / RIESERF. WESTL.	645	20151001	20160914	20/15	46.91304	12.09546	2770	-2148	BA
IT	RIES OCC. (VEDR. DI) / RIESERF. WESTL.	645	20151001	20160914	27. Sep	46.90036	12.0991	3159	-823	BA
IT	RIES OCC. (VEDR. DI) / RIESERF. WESTL.	645	20151001	20160914	13. Aug	46.90169	12.09118	3147	-1086	BA
IT	RIES OCC. (VEDR. DI) / RIESERF. WESTL.	645	20151001	20160914	26. Sep	46.90206	12.09427	3113	34	BA
IT	RIES OCC. (VEDR. DI) / RIESERF. WESTL.	645	20151001	20160914	12. Aug	46.90263	12.09945	3105	-896	BA
IT	RIES OCC. (VEDR. DI) / RIESERF. WESTL.	645	20151001	20160914	09. Aug	46.90408	12.09674	3067	-464	BA
IT	RIES OCC. (VEDR. DI) / RIESERF. WESTL.	645	20151001	20160914	14. Aug	46.90419	12.09323	3050	-1128	BA
IT	RIES OCC. (VEDR. DI) / RIESERF. WESTL.	645	20151001	20160914	Aug 20	46.90334	12.10311	3045	-1442	BA
IT	RIES OCC. (VEDR. DI) / RIESERF. WESTL.	645	20151001	20160914	01. Jul			3040	-1001	BA
IT	RIES OCC. (VEDR. DI) / RIESERF. WESTL.	645	20151001	20160914	05. Aug	46.90554	12.10275	2980	-1180	BA
IT	RIES OCC. (VEDR. DI) / RIESERF. WESTL.	645	20151001	20160914	08. Aug	46.90512	12.10523	2977	-1124	BA
IT	RIES OCC. (VEDR. DI) / RIESERF. WESTL.	645	20151001	20160914	16/13			2975	-1386	BA
IT	RIES OCC. (VEDR. DI) / RIESERF. WESTL.	645	20151001	20160914	18. Aug	46.90957	12.09677	2931	-1496	BA
IT	RIES OCC. (VEDR. DI) / RIESERF. WESTL.	645	20151001	20160914	11. Dez			2923	-1640	BA
IT	RIES OCC. (VEDR. DI) / RIESERF. WESTL.	645	20151001	20160914	23. Dez	46.91049	12.09372	2914	-2222	BA
IT	RIES OCC. (VEDR. DI) / RIESERF. WESTL.	645	20151001	20160914	24/13	46.90914	12.09227	2910	-1468	BA
IT	RIES OCC. (VEDR. DI) / RIESERF. WESTL.	645	20151001	20160914	04. Aug	46.90743	12.10294	2898	-1574	BA
IT	RIES OCC. (VEDR. DI) / RIESERF. WESTL.	645	20151001	20160914	17/13			2878	-1111	BA
IT	RIES OCC. (VEDR. DI) / RIESERF. WESTL.	645	20151001	20160914	22/13			2870	-2676	BA
IT	RIES OCC. (VEDR. DI) / RIESERF. WESTL.	645	20151001	20160914	03. Dez			2865	-1856	BA
IT	RIES OCC. (VEDR. DI) / RIESERF. WESTL.	645	20151001	20160914	25. Sep			2851	0	BA
IT	RIES OCC. (VEDR. DI) / RIESERF. WESTL.	645	20151001	20160914	21/15			2828	-3425	BA
IT	RIES OCC. (VEDR. DI) / RIESERF. WESTL.	645	20151001	20160914	19. Aug	46.90779	12.09191	2812	-504	BA
IT	RIES OCC. (VEDR. DI) / RIESERF. WESTL.	645	20151001	20160914	20/15	46.91304	12.09546	2770	-2482	BA
KG - Kyrgyzstan										
KG	ABRAMOV	732	20151408	20160109	ABR01				-3490	BA
KG	ABRAMOV	732	20151408	20160109	ABRAC03				790	BA
KG	ABRAMOV	732	20151408	20160109	ABR02				-2750	BA
KG	ABRAMOV	732	20151408	20160109	ABRAC04				1140	BA
KG	ABRAMOV	732	20151408	20160109	ABRAC02				1810	BA
KG	ABRAMOV	732	20151408	20160109	ABRAC01				1200	BA
KG	ABRAMOV	732	20151408	20160109	ABR13				420	BA
KG	ABRAMOV	732	20151408	20160109	ABR16				0	BA
KG	ABRAMOV	732	20151408	20160109	ABR15				-80	BA
KG	ABRAMOV	732	20151408	20160109	ABR14				-800	BA
KG	ABRAMOV	732	20151408	20160109	ABR08				-1080	BA
KG	ABRAMOV	732	20151408	20160109	ABR11				-510	BA
KG	ABRAMOV	732	20151408	20160109	ABR10				-1180	BA
KG	ABRAMOV	732	20151408	20160109	ABR09				-950	BA
KG	ABRAMOV	732	20151408	20160109	ABR03				-2310	BA
KG	ABRAMOV	732	20151408	20160109	ABR05				-3130	BA
KG	ABRAMOV	732	20151408	20160109	ABR06				-2120	BA
KG	ABRAMOV	732	20151408	20160109	ABR07				-1060	BA
KG	ABRAMOV	732	20151408	20160109	ABR12				50	BA
KG	ABRAMOV	732	20151408	20160109	ABR04				-2000	BA
KG	BATYSH SOOK/SYEK ZAPADNIY	781	20150806	20160913	SZAcc16a	41.78098	77.74896	4325	383	BA
KG	BATYSH SOOK/SYEK ZAPADNIY	781	20150806	20160913	ACC1	41.78101	77.74893	4324	350	BA
KG	BATYSH SOOK/SYEK ZAPADNIY	781	20150806	20160913	SZACC.16.2	41.78074	77.75046	4323	659	BA
KG	BATYSH SOOK/SYEK ZAPADNIY	781	20150806	20160913	SZACC	41.7818	77.75094	4273	280	BA

PU	GLACIER_NAME	WGMS_ID	FROM	TO	POINT_ID	LAT	LON	ELEV	MB	MB_CODE
KG	BATYSH SOOK/SYEK ZAPADNIY	781	20150806	20160913	SZ09	41.78838	77.75096	4120	-914	BA
KG	BATYSH SOOK/SYEK ZAPADNIY	781	20150806	20160913	SZ04	41.7907	77.74973	4109	-869	BA
KG	BATYSH SOOK/SYEK ZAPADNIY	781	20150806	20160913	SZ12	41.79079	77.74786	4106	-937	BA
KG	BATYSH SOOK/SYEK ZAPADNIY	781	20150806	20160913	SZ05	41.79169	77.74775	4092	-1217	BA
KG	BATYSH SOOK/SYEK ZAPADNIY	781	20150806	20160913	SZ07	41.79323	77.75018	4045	-1121	BA
KG	BATYSH SOOK/SYEK ZAPADNIY	781	20150806	20160913	SZ02	41.79408	77.74899	4032	-1258	BA
KG	BATYSH SOOK/SYEK ZAPADNIY	781	20150806	20160913	SZ01	41.79581	77.74957	3996	-1336	BA
KG	BATYSH SOOK/SYEK ZAPADNIY	781	20160913	20170915	ACSZ6	41.77965	77.74902	4363	480	BA
KG	BATYSH SOOK/SYEK ZAPADNIY	781	20160913	20170915	ACSZ5	41.77968	77.74847	4359	140	BA
KG	BATYSH SOOK/SYEK ZAPADNIY	781	20160913	20170915	ACSZ7	41.77967	77.74965	4357	400	BA
KG	BATYSH SOOK/SYEK ZAPADNIY	781	20160913	20170915	ACSZ8	41.77969	77.75071	4355	250	BA
KG	BATYSH SOOK/SYEK ZAPADNIY	781	20160913	20170915	ACSZ9	41.78027	77.74867	4337	250	BA
KG	BATYSH SOOK/SYEK ZAPADNIY	781	20160913	20170915	ACSZ1	41.78027	77.75118	4319	410	BA
KG	BATYSH SOOK/SYEK ZAPADNIY	781	20160913	20170915	ACSZ10	41.78067	77.7493	4313	820	BA
KG	BATYSH SOOK/SYEK ZAPADNIY	781	20160913	20170915	ACSZ3	41.7806	77.75107	4301	860	BA
KG	BATYSH SOOK/SYEK ZAPADNIY	781	20160913	20170915	ACSZ2	41.78121	77.74964	4287	180	BA
KG	BATYSH SOOK/SYEK ZAPADNIY	781	20160913	20170915	ACSZ4	41.78119	77.75131	4282	460	BA
KG	BATYSH SOOK/SYEK ZAPADNIY	781	20160913	20170915	SZ10	41.78563	77.75147	4195	-950	BA
KG	BATYSH SOOK/SYEK ZAPADNIY	781	20160913	20170915	SZ08	41.78663	77.75119	4182	-1150	BA
KG	BATYSH SOOK/SYEK ZAPADNIY	781	20160913	20170915	SZ09	41.78836	77.75093	4153	-1840	BA
KG	BATYSH SOOK/SYEK ZAPADNIY	781	20160913	20170915	SZ11	41.78811	77.74955	4142	-1270	BA
KG	BATYSH SOOK/SYEK ZAPADNIY	781	20160913	20170915	SZ12	41.7907	77.74794	4105	-1850	BA
KG	BATYSH SOOK/SYEK ZAPADNIY	781	20160913	20170915	SZ04	41.7907	77.74976	4103	-1440	BA
KG	BATYSH SOOK/SYEK ZAPADNIY	781	20160913	20170915	SZ05	41.79166	77.74788	4088	-2190	BA
KG	BATYSH SOOK/SYEK ZAPADNIY	781	20160913	20170915	SZ07	41.79324	77.75015	4045	-2190	BA
KG	GLACIER NO. 354 (AKSHIYRAK)	3889	20150809	20160914	AK003				-2470	BA
KG	GLACIER NO. 354 (AKSHIYRAK)	3889	20150809	20160914	sp1				40	BA
KG	GLACIER NO. 354 (AKSHIYRAK)	3889	20150809	20160914	AK017				-1053	BA
KG	GLACIER NO. 354 (AKSHIYRAK)	3889	20150809	20160914	AK016				-1110	BA
KG	GLACIER NO. 354 (AKSHIYRAK)	3889	20150809	20160914	AK015				-1730	BA
KG	GLACIER NO. 354 (AKSHIYRAK)	3889	20150809	20160914	AK011				-3200	BA
KG	GLACIER NO. 354 (AKSHIYRAK)	3889	20150809	20160914	AK008				-3560	BA
KG	GLACIER NO. 354 (AKSHIYRAK)	3889	20150809	20160914	AK007				-2730	BA
KG	GLACIER NO. 354 (AKSHIYRAK)	3889	20150809	20160914	AK004				-2100	BA
KG	GLACIER NO. 354 (AKSHIYRAK)	3889	20150809	20160914	AK006				-2400	BA
KG	GLACIER NO. 354 (AKSHIYRAK)	3889	20150809	20160914	AK002				-2860	BA
KG	GLACIER NO. 354 (AKSHIYRAK)	3889	20150809	20160914	AK001				-4770	BA
KG	GLACIER NO. 354 (AKSHIYRAK)	3889	20150809	20160914	197				50	BA
KG	GLACIER NO. 354 (AKSHIYRAK)	3889	20150809	20160914	196				70	BA
KG	GLACIER NO. 354 (AKSHIYRAK)	3889	20150809	20160914	194				30	BA
KG	GLACIER NO. 354 (AKSHIYRAK)	3889	20150809	20160914	193				30	BA
KG	GLACIER NO. 354 (AKSHIYRAK)	3889	20150809	20160914	192				30	BA
KG	GLACIER NO. 354 (AKSHIYRAK)	3889	20150809	20160914	191				40	BA
KG	GLACIER NO. 354 (AKSHIYRAK)	3889	20150809	20160914	190				50	BA
KG	GLACIER NO. 354 (AKSHIYRAK)	3889	20150809	20160914	AK005				-1850	BA
KG	GLACIER NO. 354 (AKSHIYRAK)	3889	20160914	20170909	ak16ac2	41.7963	72.1743	4261	10	BA
KG	GLACIER NO. 354 (AKSHIYRAK)	3889	20160914	20170909	196	41.7848	72.1528	4233	30	BA
KG	GLACIER NO. 354 (AKSHIYRAK)	3889	20160914	20170909	ak17ac1	41.7844	72.1524	4233	130	BA
KG	GLACIER NO. 354 (AKSHIYRAK)	3889	20160914	20170909	AK020	41.7989	72.1725	4226	-190	BA
KG	GLACIER NO. 354 (AKSHIYRAK)	3889	20160914	20170909	200	41.7901	72.1545	4146	150	BA
KG	GLACIER NO. 354 (AKSHIYRAK)	3889	20160914	20170909	AK018	41.79	72.1545	4145	-250	BA
KG	GLACIER NO. 354 (AKSHIYRAK)	3889	20160914	20170909	AK017	41.7977	72.1645	4142	-250	BA
KG	GLACIER NO. 354 (AKSHIYRAK)	3889	20160914	20170909	AK016	41.7946	72.1575	4066	-240	BA
KG	GLACIER NO. 354 (AKSHIYRAK)	3889	20160914	20170909	AK015	41.7978	72.1533	4037	-280	BA
KG	GLACIER NO. 354 (AKSHIYRAK)	3889	20160914	20170909	AK005	41.7994	72.1505	4003	-290	BA
KG	GLACIER NO. 354 (AKSHIYRAK)	3889	20160914	20170909	AK004	41.8022	72.1473	3948	-320	BA
KG	GLACIER NO. 354 (AKSHIYRAK)	3889	20160914	20170909	AK007	41.8037	72.1489	3943	-390	BA
KG	GLACIER NO. 354 (AKSHIYRAK)	3889	20160914	20170909	AK006	41.803	72.1446	3922	-360	BA
KG	GLACIER NO. 354 (AKSHIYRAK)	3889	20160914	20170909	AK003	41.805	72.1446	3904	-380	BA
KG	GLACIER NO. 354 (AKSHIYRAK)	3889	20160914	20170909	AK008	41.8063	72.1462	3885	-500	BA
KG	GLACIER NO. 354 (AKSHIYRAK)	3889	20160914	20170909	AK009	41.8055	72.141	3867	-420	BA
KG	GLACIER NO. 354 (AKSHIYRAK)	3889	20160914	20170909	AK002	41.8073	72.1419	3855	-420	BA
KG	GLACIER NO. 599 (KJUNGEI ALA-TOO)	10402	20150619	20160814	SnowPit02	42.79251	76.86676	4031	693	BA
KG	GLACIER NO. 599 (KJUNGEI ALA-TOO)	10402	20150619	20160814	SnowPit01	42.79477	76.86497	3997	382	BA
KG	GLACIER NO. 599 (KJUNGEI ALA-TOO)	10402	20150619	20160814	OK10	42.79621	76.8579	3937	-2601	BA
KG	GLACIER NO. 599 (KJUNGEI ALA-TOO)	10402	20150619	20160814	OK09	42.79622	76.85641	3907	-2340	BA
KG	GLACIER NO. 599 (KJUNGEI ALA-TOO)	10402	20150619	20160814	OK07	42.79587	76.85387	3890	-3249	BA
KG	GLACIER NO. 599 (KJUNGEI ALA-TOO)	10402	20150619	20160814	OK06	42.79493	76.85394	3886	-1701	BA
KG	GLACIER NO. 599 (KJUNGEI ALA-TOO)	10402	20150619	20160814	OK08	42.79637	76.85499	3886	-1575	BA
KG	GLACIER NO. 599 (KJUNGEI ALA-TOO)	10402	20150619	20160814	OK05	42.7939	76.85356	3858	-3996	BA
KG	GLACIER NO. 599 (KJUNGEI ALA-TOO)	10402	20150619	20160814	OK04	42.79287	76.85265	3842	-3294	BA
KG	GLACIER NO. 599 (KJUNGEI ALA-TOO)	10402	20150619	20160814	OK02	42.7923	76.85177	3811	-3492	BA
KG	GLACIER NO. 599 (KJUNGEI ALA-TOO)	10402	20150619	20160814	OK03	42.79228	76.85175	3810	-2988	BA
KG	GLACIER NO. 599 (KJUNGEI ALA-TOO)	10402	20150619	20160814	OK01	42.79093	76.84945	3770	-4005	BA
KG	GOLUBIN	753	20150814	20160829	GOL16up	42.44385	74.5061	4050	1161	BA
KG	GOLUBIN	753	20150814	20160829	168	42.4443	74.50522	4037	1332	BA
KG	GOLUBIN	753	20150814	20160829	169	42.44555	74.50507	4011	1674	BA
KG	GOLUBIN	753	20150814	20160829	170	42.44685	74.50563	3972	1359	BA
KG	GOLUBIN	753	20150814	20160829	171	42.44888	74.5046	3950	657	BA
KG	GOLUBIN	753	20150814	20160829	172	42.45027	74.50408	3942	450	BA
KG	GOLUBIN	753	20150814	20160829	173	42.45215	74.50376	3925	774	BA
KG	GOLUBIN	753	20150814	20160829	GOLac16_3	42.45214	74.50379	3925	783	BA
KG	GOLUBIN	753	20150814	20160829	174	42.45387	74.50315	3889	837	BA
KG	GOLUBIN	753	20150814	20160829	GOLac16_2	42.45474	74.50293	3884	540	BA
KG	GOLUBIN	753	20150814	20160851	175	42.45618	74.50256	3837	342	BA
KG	GOLUBIN	753	20150814	20160829	GOL15	42.45958	74.49594	3667	-1404	BA
KG	GOLUBIN	753	20150814	20160829	GOL14	42.46422	74.49345	3618	-1827	BA
KG	GOLUBIN	753	20150814	20160829	GOL13	42.46319	74.49132	3612	-1215	BA
KG	GOLUBIN	753	20150814	20160829	GOL12	42.46392	74.49022	3599	-1683	BA
KG	GOLUBIN	753	20150814	20160829	GOL10	42.46564	74.49136	3594	-2106	BA
KG	GOLUBIN	753	20150814	20160829	GOL03	42.46717	74.4889	3546	-2259	BA
KG	GOLUBIN	753	20150814	20160829	GOL04gr	42.46865	74.48901	3525	-2430	BA
KG	GOLUBIN	753	20150814	20160829	GOL05	42.47001	74.48878	3515	-2493	BA
KG	GOLUBIN	753	20150814	20160829	GOL07	42.47143	74.48875	3489	-3231	BA
KG	GOLUBIN	753	20150814	20160829	GOL02	42.4718	74.48687	3474	-2979	BA
KG	GOLUBIN	753	20150814	20160829	GOL08	42.47326	74.48525	3442	-3123	BA

PU	GLACIER_NAME	WGMS_ID	FROM	TO	POINT_ID	LAT	LON	ELEV	MB	MB_CODE
KG	GOLUBIN	753	20150814	20160829	GOL09	42.47406	74.48447	3419	-3366	BA
KG	GOLUBIN	753	20160901	20170831	ak3	42.44392	74.506	4047	1440	BA
KG	GOLUBIN	753	20160901	20170831	ak2	42.4481	74.50597	3957	693	BA
KG	GOLUBIN	753	20160901	20170831	ak1	42.45259	74.50318	3920	1179	BA
KG	GOLUBIN	753	20160901	20170831	GOL1517	42.45946	74.49598	3667	-2133	BA
KG	GOLUBIN	753	20160901	20170831	GOL1417	42.46417	74.49357	3619	-2556	BA
KG	GOLUBIN	753	20160901	20170831	GOL1317	42.46305	74.49142	3614	-1845	BA
KG	GOLUBIN	753	20160901	20170831	GOL1017	42.46551	74.49142	3591	-2520	BA
KG	GOLUBIN	753	20160901	20170831	GOL1217	42.46389	74.49034	3591	-2367	BA
KG	GOLUBIN	753	20160901	20170831	GOL0317	42.46702	74.48899	3547	-2700	BA
KG	GOLUBIN	753	20160901	20170831	GOL0517	42.47009	74.48891	3505	-2988	BA
KG	GOLUBIN	753	20160901	20170831	GOL0717	42.47128	74.48882	3490	-3717	BA
KG	GOLUBIN	753	20170831	20180824	GOL0218	42.47085	74.48671	3488	-2790	BA
KG	GOLUBIN	753	20160901	20170831	GOL0917	42.47393	74.48464	3426	-3744	BA
KG	GOLUBIN	753	20160901	20170831	GOL0117	42.4748	74.48509	3412	-4122	BA
KG	GOLUBIN	753	20170831	20180824	GOL0118	42.4748	74.48509	3412	-3510	BA
KZ - Kazakhstan										
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	1	43.04028	77.07489	3774	657	BA
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	11	43.04114	77.07493	3765	567	BA
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	2	43.03989	77.07659	3763	584	BA
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	3	43.03998	77.07757	3762	546	BA
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	4	43.04012	77.07825	3758	584	BA
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	12	43.04127	77.07587	3754	-18	BA
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	5	43.04031	77.07895	3752	462	BA
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	13	43.04112	77.07728	3748	314	BA
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	21	43.04221	77.075	3746	412	BA
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	14	43.04103	77.07826	3746	-81	BA
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	23	43.04153	77.0777	3742	-72	BA
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	16	43.0409	77.08059	3741	-315	BA
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	24	43.04156	77.07899	3741	-270	BA
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	15	43.04098	77.07986	3741	-144	BA
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	33	43.04198	77.07848	3738	-45	BA
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	25	43.04156	77.08024	3737	-252	BA
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	34	43.04204	77.07945	3737	-333	BA
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	32	43.04202	77.07737	3737	235	BA
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	22	43.04216	77.07673	3736	-72	BA
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	31	43.04263	77.07576	3734	-27	BA
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	26	43.04153	77.08088	3734	-486	BA
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	43	43.04262	77.07899	3732	-117	BA
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	42	43.04263	77.0784	3731	-144	BA
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	41	43.04262	77.07721	3730	-135	BA
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	35	43.04201	77.08084	3730	-504	BA
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	36	43.04189	77.08189	3727	-522	BA
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	59	43.04449	77.08578	3725	-324	BA
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	51	43.04378	77.07613	3721	-144	BA
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	44	43.04283	77.08063	3720	-45	BA
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	45	43.04258	77.08183	3718	-297	BA
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	52	43.04387	77.07698	3717	-198	BA
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	53	43.0439	77.07864	3714	-306	BA
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	54	43.04398	77.07948	3708	-270	BA
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	58	43.04417	77.08439	3706	-162	BA
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	56	43.04382	77.08204	3706	-459	BA
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	55	43.0439	77.08055	3701	-36	BA
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	57	43.04364	77.08279	3700	-54	BA
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	61	43.0456	77.07739	3696	-288	BA
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	69	43.04524	77.0843	3693	-234	BA
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	62	43.04565	77.07828	3693	-297	BA
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	63	43.04564	77.07917	3691	-279	BA
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	710	43.04595	77.08443	3687	-540	BA
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	68	43.04543	77.08357	3686	-459	BA
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	65	43.04566	77.08207	3684	-486	BA
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	64	43.04557	77.08061	3683	-1215	BA
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	67	43.04554	77.08299	3681	-216	BA
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	71	43.04683	77.07845	3680	-279	BA
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	79	43.04621	77.08392	3678	-333	BA
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	72	43.04682	77.0792	3677	-369	BA
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	78	43.04618	77.08321	3675	-567	BA
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	73	43.04684	77.07989	3674	-396	BA
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	75	43.04674	77.08147	3672	-432	BA
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	76	43.04667	77.08204	3672	-720	BA
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	77	43.04658	77.0826	3671	-549	BA
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	74	43.04682	77.0807	3669	-441	BA
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	87	43.04742	77.0824	3666	-1116	BA
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	81	43.04809	77.07874	3665	-414	BA
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	86	43.04758	77.08177	3665	-837	BA
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	88	43.04705	77.08345	3663	-684	BA
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	85	43.04762	77.08112	3662	-468	BA
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	82	43.048	77.07935	3661	-405	BA
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	83	43.04783	77.08008	3659	-459	BA
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	84	43.04777	77.08064	3658	-657	BA
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	91	43.04876	77.07931	3649	-774	BA
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	96	43.04808	77.08317	3647	-981	BA
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	92	43.0487	77.08005	3645	-306	BA
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	94	43.04861	77.08134	3645	-297	BA
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	93	43.04865	77.0808	3644	-396	BA
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	95	43.04847	77.08255	3644	-756	BA
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	102	43.04924	77.07974	3637	-684	BA
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	103	43.04911	77.08047	3637	-873	BA
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	104	43.04903	77.08122	3637	-504	BA
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	105	43.049	77.08194	3637	-378	BA
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	107	43.04873	77.08351	3633	-315	BA
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	106	43.04898	77.08269	3630	-792	BA
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	111	43.05025	77.07948	3616	-252	BA
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	117	43.04992	77.08358	3614	-801	BA
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	115	43.04988	77.08262	3614	-873	BA

PU	GLACIER_NAME	WGMS_ID	FROM	TO	POINT_ID	LAT	LON	ELEV	MB	MB_CODE
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	112	43.05028	77.08042	3612	-198	BA
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	114	43.05018	77.08217	3611	-747	BA
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	116	43.05003	77.08307	3610	-1125	BA
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	113	43.05025	77.08123	3610	-432	BA
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	124	43.0512	77.08247	3592	-711	BA
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	121	43.05129	77.07947	3590	-90	BA
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	123	43.05127	77.08168	3590	-783	BA
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	125	43.05105	77.08331	3589	-738	BA
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	122	43.05133	77.08072	3586	-657	BA
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	131	43.05179	77.07949	3580	-675	BA
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	132	43.05175	77.08045	3578	-873	BA
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	133	43.05188	77.08074	3577	-810	BA
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	134	43.05198	77.08206	3577	-927	BA
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	135	43.05194	77.0828	3574	-954	BA
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	141	43.05238	77.07945	3570	-738	BA
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	143	43.05247	77.0811	3570	-1260	BA
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	142	43.05245	77.08067	3569	-1008	BA
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	136	43.05187	77.08338	3568	-1125	BA
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	144	43.05251	77.08225	3564	-945	BA
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	137	43.05174	77.08404	3562	-1260	BA
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	145	43.05248	77.08302	3559	-981	BA
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	151	43.05322	77.07977	3556	-801	BA
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	152	43.05324	77.08067	3556	-1143	BA
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	146	43.05238	77.08368	3553	-1296	BA
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	147	43.05217	77.08436	3549	-846	BA
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	153	43.05336	77.08129	3548	-1125	BA
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	154	43.05328	77.08226	3545	-999	BA
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	155	43.0532	77.08295	3544	-1305	BA
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	156	43.05309	77.08351	3540	-1350	BA
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	157	43.05298	77.08399	3537	-1458	BA
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	161	43.05455	77.08089	3522	-1269	BA
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	162	43.05455	77.08203	3514	-1170	BA
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	163	43.05453	77.08265	3514	-1269	BA
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	164	43.05454	77.08334	3512	-1476	BA
KZ	TS.TUYUKSUYSKIY	817	20150825	20160825	165	43.05431	77.08421	3510	-1827	BA
KZ	TS.TUYUKSUYSKIY	817	20160825	20170902	1	43.04035	77.07491	3773	-1512	BA
KZ	TS.TUYUKSUYSKIY	817	20160825	20170902	11	43.04119	77.07494	3763	-1656	BA
KZ	TS.TUYUKSUYSKIY	817	20160825	20170902	2	43.03996	77.07663	3762	-1395	BA
KZ	TS.TUYUKSUYSKIY	817	20160825	20170902	3	43.04005	77.07758	3760	-1512	BA
KZ	TS.TUYUKSUYSKIY	817	20160825	20170902	4	43.04019	77.07826	3755	-1593	BA
KZ	TS.TUYUKSUYSKIY	817	20160825	20170902	12	43.04131	77.07588	3752	-1638	BA
KZ	TS.TUYUKSUYSKIY	817	20160825	20170902	5	43.04039	77.07896	3750	-1620	BA
KZ	TS.TUYUKSUYSKIY	817	20160825	20170902	13	43.04119	77.0773	3746	-1782	BA
KZ	TS.TUYUKSUYSKIY	817	20160825	20170902	21	43.04225	77.075	3744	-1800	BA
KZ	TS.TUYUKSUYSKIY	817	20160825	20170902	14	43.04111	77.07828	3744	-1854	BA
KZ	TS.TUYUKSUYSKIY	817	20160825	20170902	23	43.04159	77.07771	3741	-1800	BA
KZ	TS.TUYUKSUYSKIY	817	20160825	20170902	24	43.04165	77.079	3740	-1836	BA
KZ	TS.TUYUKSUYSKIY	817	20160825	20170902	15	43.04106	77.07988	3740	-1737	BA
KZ	TS.TUYUKSUYSKIY	817	20160825	20170902	16	43.04097	77.08062	3739	-2061	BA
KZ	TS.TUYUKSUYSKIY	817	20160825	20170902	33	43.04206	77.0785	3737	-1800	BA
KZ	TS.TUYUKSUYSKIY	817	20160825	20170902	25	43.04162	77.08026	3736	-2133	BA
KZ	TS.TUYUKSUYSKIY	817	20160825	20170902	32	43.04209	77.07737	3735	-1728	BA
KZ	TS.TUYUKSUYSKIY	817	20160825	20170902	34	43.04211	77.07947	3735	-1962	BA
KZ	TS.TUYUKSUYSKIY	817	20160825	20170902	22	43.04222	77.07674	3734	-1863	BA
KZ	TS.TUYUKSUYSKIY	817	20160825	20170902	26	43.04159	77.0809	3732	-2016	BA
KZ	TS.TUYUKSUYSKIY	817	20160825	20170902	31	43.04268	77.07577	3732	-1854	BA
KZ	TS.TUYUKSUYSKIY	817	20160825	20170902	43	43.04268	77.07901	3730	-1530	BA
KZ	TS.TUYUKSUYSKIY	817	20160825	20170902	41	43.04269	77.07724	3729	-1656	BA
KZ	TS.TUYUKSUYSKIY	817	20160825	20170902	42	43.04269	77.0784	3729	-1539	BA
KZ	TS.TUYUKSUYSKIY	817	20160825	20170902	35	43.04207	77.08087	3728	-2052	BA
KZ	TS.TUYUKSUYSKIY	817	20160825	20170902	36	43.04194	77.0819	3725	-2043	BA
KZ	TS.TUYUKSUYSKIY	817	20160825	20170902	59	43.04452	77.08572	3723	-2088	BA
KZ	TS.TUYUKSUYSKIY	817	20160825	20170902	51	43.04374	77.07611	3719	-1962	BA
KZ	TS.TUYUKSUYSKIY	817	20160825	20170902	44	43.0429	77.08064	3718	-1593	BA
KZ	TS.TUYUKSUYSKIY	817	20160825	20170902	45	43.04264	77.08185	3716	-1827	BA
KZ	TS.TUYUKSUYSKIY	817	20160825	20170902	53	43.04396	77.07866	3712	-2034	BA
KZ	TS.TUYUKSUYSKIY	817	20160825	20170902	54	43.04403	77.0795	3706	-1980	BA
KZ	TS.TUYUKSUYSKIY	817	20160825	20170902	58	43.04419	77.08436	3704	-1854	BA
KZ	TS.TUYUKSUYSKIY	817	20160825	20170902	56	43.04387	77.08206	3703	-2061	BA
KZ	TS.TUYUKSUYSKIY	817	20160825	20170902	55	43.04397	77.08056	3699	-1809	BA
KZ	TS.TUYUKSUYSKIY	817	20160825	20170902	61	43.04563	77.07739	3694	-1809	BA
KZ	TS.TUYUKSUYSKIY	817	20160825	20170902	69	43.04527	77.08427	3692	-1881	BA
KZ	TS.TUYUKSUYSKIY	817	20160825	20170902	62	43.04569	77.07828	3691	-1953	BA
KZ	TS.TUYUKSUYSKIY	817	20160825	20170902	63	43.04568	77.07917	3688	-1899	BA
KZ	TS.TUYUKSUYSKIY	817	20160825	20170902	710	43.04598	77.08439	3685	-1944	BA
KZ	TS.TUYUKSUYSKIY	817	20160825	20170902	68	43.04546	77.08355	3684	-1980	BA
KZ	TS.TUYUKSUYSKIY	817	20160825	20170902	65	43.04571	77.08208	3682	-1935	BA
KZ	TS.TUYUKSUYSKIY	817	20160825	20170902	64	43.04562	77.08064	3681	-2061	BA
KZ	TS.TUYUKSUYSKIY	817	20160825	20170902	67	43.04557	77.08297	3680	-1800	BA
KZ	TS.TUYUKSUYSKIY	817	20160825	20170902	71	43.04686	77.07844	3678	-2151	BA
KZ	TS.TUYUKSUYSKIY	817	20160825	20170902	79	43.04623	77.08389	3676	-1836	BA
KZ	TS.TUYUKSUYSKIY	817	20160825	20170902	72	43.04686	77.07921	3675	-1917	BA
KZ	TS.TUYUKSUYSKIY	817	20160825	20170902	78	43.0462	77.0832	3673	-2061	BA
KZ	TS.TUYUKSUYSKIY	817	20160825	20170902	75	43.04679	77.08146	3671	-1944	BA
KZ	TS.TUYUKSUYSKIY	817	20160825	20170902	73	43.04688	77.07989	3671	-1935	BA
KZ	TS.TUYUKSUYSKIY	817	20160825	20170902	76	43.04671	77.08204	3670	-2034	BA
KZ	TS.TUYUKSUYSKIY	817	20160825	20170902	77	43.04662	77.0826	3669	-2133	BA
KZ	TS.TUYUKSUYSKIY	817	20160825	20170902	74	43.04687	77.08071	3667	-2448	BA
KZ	TS.TUYUKSUYSKIY	817	20160825	20170902	87	43.04747	77.0824	3664	-2637	BA
KZ	TS.TUYUKSUYSKIY	817	20160825	20170902	86	43.04762	77.08178	3663	-2133	BA
KZ	TS.TUYUKSUYSKIY	817	20160825	20170902	81	43.04811	77.07875	3662	-2088	BA
KZ	TS.TUYUKSUYSKIY	817	20160825	20170902	85	43.04768	77.08113	3660	-1971	BA
KZ	TS.TUYUKSUYSKIY	817	20160825	20170902	88	43.04708	77.08345	3660	-2349	BA
KZ	TS.TUYUKSUYSKIY	817	20160825	20170902	82	43.04802	77.07937	3658	-2142	BA
KZ	TS.TUYUKSUYSKIY	817	20160825	20170902	83	43.04789	77.08008	3657	-2079	BA
KZ	TS.TUYUKSUYSKIY	817	20160825	20170902	84	43.04782	77.08065	3656	-1854	BA

PU	GLACIER_NAME	WGMS_ID	FROM	TO	POINT_ID	LAT	LON	ELEV	MB	MB_CODE
KZ	TS.TUYUKSUYSKIY	817	20160825	20170902	91	43.04878	77.07931	3646	-2223	BA
KZ	TS.TUYUKSUYSKIY	817	20160825	20170902	96	43.04811	77.08318	3645	-2187	BA
KZ	TS.TUYUKSUYSKIY	817	20160825	20170902	94	43.04865	77.08137	3643	-2016	BA
KZ	TS.TUYUKSUYSKIY	817	20160825	20170902	93	43.04869	77.08081	3642	-2079	BA
KZ	TS.TUYUKSUYSKIY	817	20160825	20170902	92	43.04873	77.08008	3642	-2421	BA
KZ	TS.TUYUKSUYSKIY	817	20160825	20170902	95	43.04851	77.08255	3641	-1845	BA
KZ	TS.TUYUKSUYSKIY	817	20160825	20170902	104	43.04906	77.08124	3635	-2061	BA
KZ	TS.TUYUKSUYSKIY	817	20160825	20170902	103	43.04915	77.08048	3635	-2439	BA
KZ	TS.TUYUKSUYSKIY	817	20160825	20170902	105	43.04904	77.08196	3634	-1674	BA
KZ	TS.TUYUKSUYSKIY	817	20160825	20170902	102	43.04927	77.07975	3634	-2304	BA
KZ	TS.TUYUKSUYSKIY	817	20160825	20170902	106	43.04902	77.08269	3627	-2034	BA
KZ	TS.TUYUKSUYSKIY	817	20160825	20170902	111	43.05028	77.07949	3614	-1692	BA
KZ	TS.TUYUKSUYSKIY	817	20160825	20170902	117	43.04996	77.08358	3612	-2358	BA
KZ	TS.TUYUKSUYSKIY	817	20160825	20170902	115	43.04993	77.08262	3612	-2250	BA
KZ	TS.TUYUKSUYSKIY	817	20160825	20170902	112	43.05031	77.08042	3610	-1863	BA
KZ	TS.TUYUKSUYSKIY	817	20160825	20170902	114	43.05023	77.08216	3609	-2205	BA
KZ	TS.TUYUKSUYSKIY	817	20160825	20170902	113	43.05029	77.08123	3608	-1764	BA
KZ	TS.TUYUKSUYSKIY	817	20160825	20170902	116	43.05007	77.08308	3607	-2592	BA
KZ	TS.TUYUKSUYSKIY	817	20160825	20170902	121	43.05131	77.07947	3589	-1395	BA
KZ	TS.TUYUKSUYSKIY	817	20160825	20170902	124	43.05121	77.08249	3589	-2178	BA
KZ	TS.TUYUKSUYSKIY	817	20160825	20170902	123	43.05131	77.08169	3588	-2358	BA
KZ	TS.TUYUKSUYSKIY	817	20160825	20170902	125	43.05109	77.08334	3586	-2547	BA
KZ	TS.TUYUKSUYSKIY	817	20160825	20170902	122	43.05135	77.08073	3584	-2160	BA
KZ	TS.TUYUKSUYSKIY	817	20160825	20170902	131	43.0518	77.0795	3578	-2052	BA
KZ	TS.TUYUKSUYSKIY	817	20160825	20170902	132	43.05178	77.08045	3576	-2502	BA
KZ	TS.TUYUKSUYSKIY	817	20160825	20170902	133	43.0519	77.08075	3575	-2556	BA
KZ	TS.TUYUKSUYSKIY	817	20160825	20170902	134	43.05198	77.08207	3575	-2430	BA
KZ	TS.TUYUKSUYSKIY	817	20160825	20170902	135	43.05196	77.08279	3572	-2385	BA
KZ	TS.TUYUKSUYSKIY	817	20160825	20170902	141	43.05239	77.07944	3568	-2295	BA
KZ	TS.TUYUKSUYSKIY	817	20160825	20170902	143	43.05248	77.0811	3568	-2745	BA
KZ	TS.TUYUKSUYSKIY	817	20160825	20170902	142	43.05247	77.0807	3567	-2880	BA
KZ	TS.TUYUKSUYSKIY	817	20160825	20170902	136	43.05189	77.08339	3565	-2826	BA
KZ	TS.TUYUKSUYSKIY	817	20160825	20170902	144	43.05252	77.08228	3562	-2322	BA
KZ	TS.TUYUKSUYSKIY	817	20160825	20170902	137	43.05177	77.08406	3558	-2583	BA
KZ	TS.TUYUKSUYSKIY	817	20160825	20170902	145	43.0525	77.08302	3556	-2655	BA
KZ	TS.TUYUKSUYSKIY	817	20160825	20170902	152	43.05324	77.08068	3554	-2871	BA
KZ	TS.TUYUKSUYSKIY	817	20160825	20170902	151	43.05321	77.07978	3553	-2241	BA
KZ	TS.TUYUKSUYSKIY	817	20160825	20170902	146	43.05238	77.0837	3550	-2979	BA
KZ	TS.TUYUKSUYSKIY	817	20160825	20170902	147	43.05217	77.08437	3547	-2700	BA
KZ	TS.TUYUKSUYSKIY	817	20160825	20170902	154	43.05328	77.08225	3543	-2745	BA
KZ	TS.TUYUKSUYSKIY	817	20160825	20170902	155	43.05321	77.08294	3541	-2835	BA
KZ	TS.TUYUKSUYSKIY	817	20160825	20170902	156	43.05309	77.08351	3537	-2700	BA
KZ	TS.TUYUKSUYSKIY	817	20160825	20170902	157	43.05299	77.08398	3534	-3249	BA
KZ	TS.TUYUKSUYSKIY	817	20160825	20170902	161	43.05456	77.0809	3519	-3168	BA
KZ	TS.TUYUKSUYSKIY	817	20160825	20170902	163	43.05453	77.08266	3511	-3015	BA
KZ	TS.TUYUKSUYSKIY	817	20160825	20170902	162	43.05455	77.08204	3511	-2952	BA
KZ	TS.TUYUKSUYSKIY	817	20160825	20170902	164	43.05454	77.08334	3509	-3150	BA
KZ	TS.TUYUKSUYSKIY	817	20160825	20170902	165	43.0543	77.0842	3507	-2988	BA
NP - Nepal										
NP	YALA	912	20151127	20161120	S8_Sawdust	28.23448	85.62491	5482	286	BA
NP	YALA	912	20151127	20161120	S8_1115	28.23448	85.62491	5482	171	BA
NP	YALA	912	20151127	20161120	S7-1115-SVII-May16	28.23468	85.62339	5447	122	BA
NP	YALA	912	20151127	20161119	S6_1115	28.23461	85.62169	5402	-369	BA
NP	YALA	912	20151127	20161119	S6_itp_m	85.62153	28.23452	5402	-635	BA
NP	YALA	912	20151127	20161119	S6_itp_2	85.62153	28.23451	5402	-323	BA
NP	YALA	912	20151127	20161119	S5_1112	28.23443	85.62009	5358	-478	BA
NP	YALA	912	20151127	20161119	S5_1115	28.2344	85.62022	5357	-500	BA
NP	YALA	912	20151127	20161119	S4_1115	28.23468	85.61795	5316	-1338	BA
NP	YALA	912	20151126	20161119	S3_1114	28.23451	85.6167	5276	-1537	BA
NP	YALA	912	20151126	20161119	S3_1115	28.23448	85.6167	5276	-1734	BA
NP	YALA	912	20151126	20161119	S2_1115	28.23473	85.61511	5226	-2106	BA
NP	YALA	912	20151126	20161118	S1_1115	28.23522	85.61267	5178	-2495	BA
NP	YALA	912	20161120	20171123	S8A_1116	28.23511	85.62486	5471	-496	BA
NP	YALA	912	20161120	20171123	S8_0516_L	28.23433	85.6249	5452	-276	BA
NP	YALA	912	20161120	20171123	S8_itp_2_e	28.23434	85.62482	5451	-357	BA
NP	YALA	912	20161120	20171123	S8_1115	28.23435	85.62488	5451	-317	BA
NP	YALA	912	20161119	20171121	S6_1115	28.2346	85.62164	5369	-1254	BA
NP	YALA	912	20161121	20171121	S6_0516_L	28.23455	85.62155	5365	-1439	BA
NP	YALA	912	20161121	20171121	S6_itp_m	28.23452	85.62153	5363	-1289	BA
NP	YALA	912	20161119	20171121	S5_0516_L	28.23435	85.62002	5321	-1211	BA
NP	YALA	912	20161119	20171122	S4_1115	28.23468	85.61795	5316	-2008	BA
NP	YALA	912	20161119	20171122	S4_0516_L	28.23459	85.61793	5294	-2430	BA
NP	YALA	912	20161121	20171121	S4A_1116	28.23579	85.61708	5283	-2176	BA
NP	YALA	912	20161119	20171122	S3_1116	28.2345	85.61674	5257	-2611	BA
NP	YALA	912	20161121	20171122	S3A_1116	28.23593	85.61565	5235	-2745	BA
NP	YALA	912	20161119	20171122	S2_1116	28.23487	85.61517	5196	-3309	BA
NZ - New Zealand										
NZ	ROLLESTON	1538	20150320	20151106	S1	-42.8885	171.5266	1798	3474	BW
NZ	ROLLESTON	1538	20150320	20160507	S1	-42.8885	171.5266	1798	5	BA
NZ	ROLLESTON	1538	20151106	20160507	S1	-42.8885	171.5266	1798	-3469	BS
NZ	ROLLESTON	1538	20150320	20160507	S2	-42.8889	171.5265	1787	-422	BA
NZ	ROLLESTON	1538	20151106	20160507	S2	-42.8889	171.5265	1787	-3405	BS
NZ	ROLLESTON	1538	20150320	20151106	S2	-42.8889	171.5265	1787	2983	BW
NZ	ROLLESTON	1538	20150320	20160507	S3	-42.8899	171.5273	1757	-3798	BA
NZ	ROLLESTON	1538	20151106	20160507	S3	-42.8899	171.5273	1757	-6021	BS
NZ	ROLLESTON	1538	20150320	20151106	S3	-42.8899	171.5273	1757	2223	BW
NZ	ROLLESTON	1538	20150320	20151106	S4	-42.8902	171.5274	1743	2376	BW
NZ	ROLLESTON	1538	20151106	20160507	S4	-42.8902	171.5274	1743	-4873	BS
NZ	ROLLESTON	1538	20150320	20160507	S4	-42.8902	171.5274	1743	-2490	BA
NZ	ROLLESTON	1538	20161122	20170319	S1	-42.88865	171.52668	1818	-2054	BS
NZ	ROLLESTON	1538	20161122	20170319	S2	-42.88944	171.52708	1793	-2250	BS
NZ	ROLLESTON	1538	20161122	20170319	S3	-42.88985	171.52737	1775	-2892	BS
NZ	ROLLESTON	1538	20161122	20170319	S4	-42.88997	171.52735	1761	-3238	BS
NZ	ROLLESTON	1538	20160507	20161122	36	-42.88888	171.52629		2788	BW

PU	GLACIER_NAME	WGMS_ID	FROM	TO	POINT_ID	LAT	LON	ELEV	MB	MB_CODE
NZ	ROLLESTON	1538	20160507	20161122	35	-42.88886	171.52634		2190	BW
NZ	ROLLESTON	1538	20160507	20161122	34	-42.88883	171.52642		2730	BW
NZ	ROLLESTON	1538	20160507	20161122	33	-42.88884	171.52646		2645	BW
NZ	ROLLESTON	1538	20160507	20161122	43	-42.88924	171.52581		2332	BW
NZ	ROLLESTON	1538	20160507	20170319	168	-42.88762	171.52725		1388	BA
NZ	ROLLESTON	1538	20160507	20161122	32	-42.88855	171.52632		3561	BW
NZ	ROLLESTON	1538	20160507	20161122	49	-42.88858	171.52694		2745	BW
NZ	ROLLESTON	1538	20160507	20161122	47	-42.8886	171.52677		2645	BW
NZ	ROLLESTON	1538	20160507	20161122	46	-42.88948	171.52561		2348	BW
NZ	ROLLESTON	1538	20160507	20161122	48	-42.88867	171.52685		2666	BW
NZ	ROLLESTON	1538	20160507	20161122	44	-42.88934	171.52576		3159	BW
NZ	ROLLESTON	1538	20160507	20161122	37	-42.88891	171.52635		2740	BW
NZ	ROLLESTON	1538	20160507	20161122	42	-42.88922	171.52592		2337	BW
NZ	ROLLESTON	1538	20160507	20161122	41	-42.8891	171.52604		2592	BW
NZ	ROLLESTON	1538	20160507	20161122	40	-42.88911	171.52607		2660	BW
NZ	ROLLESTON	1538	20160507	20161122	4	-42.88997	171.52735		1670	BW
NZ	ROLLESTON	1538	20160507	20161122	39	-42.88905	171.52622		2798	BW
NZ	ROLLESTON	1538	20160507	20161122	38	-42.88906	171.52616		2798	BW
NZ	ROLLESTON	1538	20160507	20161122	45	-42.88943	171.5257		2206	BW
NZ	ROLLESTON	1538	20160507	20161122	5	-42.89047	171.52761		3074	BW
NZ	ROLLESTON	1538	20160507	20170319	176	-42.8885	171.52758		723	BA
NZ	ROLLESTON	1538	20160507	20170319	175	-42.88833	171.52746		819	BA
NZ	ROLLESTON	1538	20160507	20170319	174	-42.88815	171.52753		861	BA
NZ	ROLLESTON	1538	20160507	20170319	173	-42.88726	171.52711		1039	BA
NZ	ROLLESTON	1538	20160507	20170319	172	-42.88738	171.52719		938	BA
NZ	ROLLESTON	1538	20160507	20161122	17	-42.88974	171.52716		1962	BW
NZ	ROLLESTON	1538	20160507	20170319	170	-42.88748	171.5272		986	BA
NZ	ROLLESTON	1538	20160507	20170319	180	-42.88902	171.5272		210	BA
NZ	ROLLESTON	1538	20160507	20170319	169	-42.88758	171.52722		1699	BA
NZ	ROLLESTON	1538	20160507	20170319	72	-42.88953	171.52626		103	BA
NZ	ROLLESTON	1538	20160507	20170319	167	-42.88772	171.52728		1246	BA
NZ	ROLLESTON	1538	20160507	20170319	166	-42.88779	171.5273		1032	BA
NZ	ROLLESTON	1538	20160507	20170319	165	-42.88785	171.52725		759	BA
NZ	ROLLESTON	1538	20160507	20170319	164	-42.88795	171.52789		511	BA
NZ	ROLLESTON	1538	20160507	20170319	171	-42.88742	171.5272		1099	BA
NZ	ROLLESTON	1538	20160507	20161122	23	-42.88949	171.52701		3127	BW
NZ	ROLLESTON	1538	20160507	20161122	30	-42.88863	171.52634		3180	BW
NZ	ROLLESTON	1538	20160507	20161122	3	-42.88985	171.52737		1776	BW
NZ	ROLLESTON	1538	20160507	20161122	29	-42.88863	171.52634		3100	BW
NZ	ROLLESTON	1538	20160507	20161122	28	-42.88863	171.52633		3153	BW
NZ	ROLLESTON	1538	20160507	20161122	27	-42.8886	171.52629		4212	BW
NZ	ROLLESTON	1538	20160507	20161122	26	-42.88864	171.52632		3736	BW
NZ	ROLLESTON	1538	20160507	20170319	178	-42.88882	171.52773		943	BA
NZ	ROLLESTON	1538	20160507	20161122	24	-42.88942	171.52691		2836	BW
NZ	ROLLESTON	1538	20160507	20161122	18	-42.88967	171.52705		2677	BW
NZ	ROLLESTON	1538	20160507	20161122	22	-42.8896	171.52707		2311	BW
NZ	ROLLESTON	1538	20160507	20161122	21	-42.88965	171.52708		2453	BW
NZ	ROLLESTON	1538	20160507	20161122	20	-42.88974	171.52714		2359	BW
NZ	ROLLESTON	1538	20160507	20161122	2	-42.88944	171.52708		2306	BW
NZ	ROLLESTON	1538	20160507	20161122	19	-42.88971	171.52711		1883	BW
NZ	ROLLESTON	1538	20160507	20161122	31	-42.88852	171.52628		4212	BW
NZ	ROLLESTON	1538	20160507	20161122	25	-42.88867	171.52635		3709	BW
NZ	ROLLESTON	1538	20160507	20170319	90	-42.8892	171.5254		189	BA
NZ	ROLLESTON	1538	20160507	20170319	79	-42.88933	171.52618		247	BA
NZ	ROLLESTON	1538	20160507	20161122	8	-42.89028	171.52755		2274	BW
NZ	ROLLESTON	1538	20160507	20170319	80	-42.88933	171.52617		564	BA
NZ	ROLLESTON	1538	20160507	20170319	81	-42.88936	171.52609		247	BA
NZ	ROLLESTON	1538	20160507	20170319	82	-42.88931	171.52593		319	BA
NZ	ROLLESTON	1538	20160507	20170319	83	-42.8893	171.52593		178	BA
NZ	ROLLESTON	1538	20160507	20170319	84	-42.88928	171.52587		236	BA
NZ	ROLLESTON	1538	20160507	20170319	85	-42.88929	171.52586		205	BA
NZ	ROLLESTON	1538	20160507	20170319	86	-42.88921	171.52573		199	BA
NZ	ROLLESTON	1538	20160507	20170319	87	-42.8893	171.52565		476	BA
NZ	ROLLESTON	1538	20160507	20170319	88	-42.88931	171.52558		349	BA
NZ	ROLLESTON	1538	20160507	20170319	70	-42.88957	171.52615		48	BA
NZ	ROLLESTON	1538	20160507	20161122	9	-42.89023	171.52753		2306	BW
NZ	ROLLESTON	1538	20160507	20170319	76	-42.8893	171.52618		413	BA
NZ	ROLLESTON	1538	20160507	20170319	91	-42.88932	171.52528		275	BA
NZ	ROLLESTON	1538	20160507	20170319	92	-42.88931	171.52521		327	BA
NZ	ROLLESTON	1538	20160507	20170319	93	-42.88924	171.52514		319	BA
NZ	ROLLESTON	1538	20160507	20170319	94	-42.88923	171.5251		189	BA
NZ	ROLLESTON	1538	20160507	20170319	95	-42.88915	171.52521		1514	BA
NZ	ROLLESTON	1538	20160507	20170319	96	-42.88927	171.52543		370	BA
NZ	ROLLESTON	1538	20160507	20170319	97	-42.88913	171.5254		1198	BA
NZ	ROLLESTON	1538	20160507	20170319	98	-42.88916	171.5255		890	BA
NZ	ROLLESTON	1538	20160507	20170319	99	-42.88923	171.52569		592	BA
NZ	ROLLESTON	1538	20160507	20170319	177	-42.88873	171.52776		700	BA
NZ	ROLLESTON	1538	20160507	20170319	163	-42.88797	171.52762		819	BA
NZ	ROLLESTON	1538	20160507	20170319	89	-42.88925	171.52533		587	BA
NZ	ROLLESTON	1538	20160507	20161122	63	-42.88922	171.52683		2422	BW
NZ	ROLLESTON	1538	20160507	20161122	51	-42.88841	171.52715		2692	BW
NZ	ROLLESTON	1538	20160507	20161122	52	-42.88824	171.52745		2735	BW
NZ	ROLLESTON	1538	20160507	20161122	53	-42.88811	171.52742		2512	BW
NZ	ROLLESTON	1538	20160507	20161122	54	-42.88811	171.52771		2512	BW
NZ	ROLLESTON	1538	20160507	20161122	55	-42.88806	171.5278		2544	BW
NZ	ROLLESTON	1538	20160507	20161122	56	-42.88806	171.5278		2506	BW
NZ	ROLLESTON	1538	20160507	20161122	57	-42.88796	171.52808		3159	BW
NZ	ROLLESTON	1538	20160507	20161122	58	-42.88787	171.5281		2597	BW
NZ	ROLLESTON	1538	20160507	20161122	59	-42.88787	171.5281		2206	BW
NZ	ROLLESTON	1538	20160507	20161122	6	-42.89042	171.52758		2285	BW
NZ	ROLLESTON	1538	20160507	20161122	60	-42.88922	171.52645		2660	BW
NZ	ROLLESTON	1538	20160507	20170319	78	-42.88934	171.52613		291	BA
NZ	ROLLESTON	1538	20160507	20161122	62	-42.88908	171.52675		2692	BW
NZ	ROLLESTON	1538	20160507	20170319	77	-42.88934	171.52613		189	BA
NZ	ROLLESTON	1538	20160507	20161122	64	-42.88924	171.52685		2374	BW
NZ	ROLLESTON	1538	20160507	20161122	65	-42.88933	171.5269		2427	BW

PU	GLACIER_NAME	WGMS_ID	FROM	TO	POINT_ID	LAT	LON	ELEV	MB	MB_CODE
NZ	ROLLESTON	1538	20160507	20161122	66	-42.88944	171.52696		2480	BW
NZ	ROLLESTON	1538	20160507	20170319	67	-42.88962	171.52606		386	BA
NZ	ROLLESTON	1538	20160507	20170319	68	-42.88961	171.52609		48	BA
NZ	ROLLESTON	1538	20160507	20170319	69	-42.88959	171.52615		48	BA
NZ	ROLLESTON	1538	20160507	20161122	7	-42.89037	171.52759		2053	BW
NZ	ROLLESTON	1538	20160507	20170319	71	-42.88959	171.52605		48	BA
NZ	ROLLESTON	1538	20160507	20170319	73	-42.88945	171.52627		162	BA
NZ	ROLLESTON	1538	20160507	20170319	74	-42.88938	171.52632		189	BA
NZ	ROLLESTON	1538	20160507	20170319	75	-42.88939	171.52629		199	BA
NZ	ROLLESTON	1538	20160507	20161122	50	-42.88838	171.52714		2512	BW
NZ	ROLLESTON	1538	20160507	20161122	61	-42.88895	171.52663		2660	BW
NZ	ROLLESTON	1538	20160507	20170319	120	-42.88933	171.52659		598	BA
NZ	ROLLESTON	1538	20160507	20161122	13	-42.89001	171.52739		1675	BW
NZ	ROLLESTON	1538	20160507	20170319	114	-42.88926	171.52627		587	BA
NZ	ROLLESTON	1538	20160507	20170319	115	-42.88925	171.52633		570	BA
NZ	ROLLESTON	1538	20160507	20170319	116	-42.88925	171.52627		717	BA
NZ	ROLLESTON	1538	20160507	20170319	117	-42.88952	171.52687		189	BA
NZ	ROLLESTON	1538	20160507	20170319	118	-42.88948	171.52677		275	BA
NZ	ROLLESTON	1538	20160507	20170319	112	-42.88945	171.52654		241	BA
NZ	ROLLESTON	1538	20160507	20161122	12	-42.89001	171.52734		1711	BW
NZ	ROLLESTON	1538	20160507	20170319	111	-42.88952	171.52659		129	BA
NZ	ROLLESTON	1538	20160507	20170319	121	-42.88929	171.52645		470	BA
NZ	ROLLESTON	1538	20160507	20170319	123	-42.88915	171.52638		825	BA
NZ	ROLLESTON	1538	20160507	20170319	125	-42.88904	171.52653		788	BA
NZ	ROLLESTON	1538	20160507	20170319	126	-42.88902	171.52652		1496	BA
NZ	ROLLESTON	1538	20160507	20170319	127	-42.88912	171.5266		759	BA
NZ	ROLLESTON	1538	20160507	20170319	128	-42.88916	171.52667		581	BA
NZ	ROLLESTON	1538	20160507	20170319	129	-42.88927	171.52679		391	BA
NZ	ROLLESTON	1538	20160507	20170319	119	-42.88948	171.52665		365	BA
NZ	ROLLESTON	1538	20160507	20170319	104	-42.88936	171.5261		354	BA
NZ	ROLLESTON	1538	20160507	20170319	162	-42.888	171.52734		842	BA
NZ	ROLLESTON	1538	20160507	20170319	179	-42.88894	171.52751		20	BA
NZ	ROLLESTON	1538	20160507	20161122	1	-42.88865	171.52668		2809	BW
NZ	ROLLESTON	1538	20160507	20161122	10	-42.89018	171.5275		1563	BW
NZ	ROLLESTON	1538	20160507	20170319	100	-42.88925	171.52576		359	BA
NZ	ROLLESTON	1538	20160507	20170319	101	-42.88928	171.52581		178	BA
NZ	ROLLESTON	1538	20160507	20170319	113	-42.88942	171.52647		386	BA
NZ	ROLLESTON	1538	20160507	20170319	103	-42.88933	171.52602		247	BA
NZ	ROLLESTON	1538	20160507	20170319	124	-42.88902	171.52622		836	BA
NZ	ROLLESTON	1538	20160507	20170319	105	-42.88934	171.52621		327	BA
NZ	ROLLESTON	1538	20160507	20170319	106	-42.88937	171.52627		327	BA
NZ	ROLLESTON	1538	20160507	20170319	107	-42.88941	171.52631		225	BA
NZ	ROLLESTON	1538	20160507	20170319	108	-42.88946	171.52632		252	BA
NZ	ROLLESTON	1538	20160507	20170319	109	-42.88955	171.5264		302	BA
NZ	ROLLESTON	1538	20160507	20161122	11	-42.89009	171.52745		1733	BW
NZ	ROLLESTON	1538	20160507	20170319	110	-42.88958	171.52645		108	BA
NZ	ROLLESTON	1538	20160507	20170319	102	-42.88927	171.52598		291	BA
NZ	ROLLESTON	1538	20160507	20170319	155	-42.88819	171.52635		1354	BA
NZ	ROLLESTON	1538	20160507	20170319	147	-42.88888	171.52665		825	BA
NZ	ROLLESTON	1538	20160507	20170319	148	-42.88876	171.52655		907	BA
NZ	ROLLESTON	1538	20160507	20170319	149	-42.88865	171.52662		991	BA
NZ	ROLLESTON	1538	20160507	20161122	15	-42.88986	171.52721		2518	BW
NZ	ROLLESTON	1538	20160507	20170319	130	-42.88938	171.52695		354	BA
NZ	ROLLESTON	1538	20160507	20170319	151	-42.88841	171.52647		861	BA
NZ	ROLLESTON	1538	20160507	20170319	122	-42.88915	171.52634		676	BA
NZ	ROLLESTON	1538	20160507	20170319	146	-42.88876	171.52513		1246	BA
NZ	ROLLESTON	1538	20160507	20170319	154	-42.88823	171.5264		1258	BA
NZ	ROLLESTON	1538	20160507	20170319	150	-42.88855	171.52658		729	BA
NZ	ROLLESTON	1538	20160507	20170319	156	-42.88807	171.52626		1561	BA
NZ	ROLLESTON	1538	20160507	20170319	157	-42.88802	171.5262		1396	BA
NZ	ROLLESTON	1538	20160507	20170319	158	-42.88793	171.52613		1170	BA
NZ	ROLLESTON	1538	20160507	20170319	159	-42.8882	171.52656		1377	BA
NZ	ROLLESTON	1538	20160507	20161122	16	-42.88987	171.52722		1941	BW
NZ	ROLLESTON	1538	20160507	20170319	160	-42.88807	171.52687		1436	BA
NZ	ROLLESTON	1538	20160507	20170319	161	-42.88802	171.52714		920	BA
NZ	ROLLESTON	1538	20160507	20170319	153	-42.88829	171.52642		1158	BA
NZ	ROLLESTON	1538	20160507	20170319	134	-42.88921	171.52706		493	BA
NZ	ROLLESTON	1538	20160507	20170319	131	-42.88945	171.52703		53	BA
NZ	ROLLESTON	1538	20160507	20170319	132	-42.88941	171.52719		124	BA
NZ	ROLLESTON	1538	20160507	20170319	152	-42.88838	171.52648		1099	BA
NZ	ROLLESTON	1538	20160507	20170319	133	-42.88931	171.52711		103	BA
NZ	ROLLESTON	1538	20160507	20170319	145	-42.88881	171.52476		1396	BA
NZ	ROLLESTON	1538	20160507	20170319	135	-42.88912	171.527		802	BA
NZ	ROLLESTON	1538	20160507	20170319	136	-42.88906	171.52702		966	BA
NZ	ROLLESTON	1538	20160507	20170319	137	-42.88894	171.52688		575	BA
NZ	ROLLESTON	1538	20160507	20170319	143	-42.88855	171.52529		949	BA
NZ	ROLLESTON	1538	20160507	20170319	138	-42.88876	171.52633		1074	BA
NZ	ROLLESTON	1538	20160507	20170319	144	-42.88898	171.52494		1204	BA
NZ	ROLLESTON	1538	20160507	20170319	142	-42.88854	171.52505		1401	BA
NZ	ROLLESTON	1538	20160507	20170319	141	-42.88858	171.52564		1377	BA
NZ	ROLLESTON	1538	20160507	20170319	140	-42.88857	171.52591		1294	BA
NZ	ROLLESTON	1538	20160507	20161122	14	-42.88996	171.52734		1749	BW
NZ	ROLLESTON	1538	20160507	20170319	139	-42.88861	171.526		1020	BA
SE - Sweden										
SE	STORGLACIAEREN	332	20150999	20160999	32N9	67.9131	18.5401	1641	1600	BA
SE	STORGLACIAEREN	332	20150999	20160999	32N5	67.9095	18.5391	1612	1440	BA
SE	STORGLACIAEREN	332	20150999	20160999	30N7	67.9112	18.542	1603	1190	BA
SE	STORGLACIAEREN	332	20150999	20160999	28N7	67.911	18.5467	1589	730	BA
SE	STORGLACIAEREN	332	20150999	20160999	30N5	67.9094	18.5414	1581	1700	BA
SE	STORGLACIAEREN	332	20150999	20160999	29S6	67.8995	18.5408	1568	870	BA
SE	STORGLACIAEREN	332	20150999	20160999	28N5	67.9092	18.5462	1567	500	BA
SE	STORGLACIAEREN	332	20150999	20160999	26N5	67.909	18.5509	1548	370	BA
SE	STORGLACIAEREN	332	20150999	20160999	29S3	67.9022	18.5416	1516	3110	BA
SE	STORGLACIAEREN	332	20150999	20160999	25N3	67.9072	18.5527	1510	220	BA
SE	STORGLACIAEREN	332	20150999	20160999	29C	67.9049	18.5424	1505	1530	BA

PU	GLACIER_NAME	WGMS_ID	FROM	TO	POINT_ID	LAT	LON	ELEV	MB	MB_CODE
SE	STORGLACIAEREN	332	20150999	20160999	27S4	67.9011	18.5461	1501	1080	BA
SE	STORGLACIAEREN	332	20150999	20160999	27N2	67.9065	18.5477	1499	430	BA
SE	STORGLACIAEREN	332	20150999	20160999	27C	67.9047	18.5472	1496	510	BA
SE	STORGLACIAEREN	332	20150999	20160999	27S2	67.9029	18.5466	1494	680	BA
SE	STORGLACIAEREN	332	20150999	20160999	25S4	67.9009	18.5508	1480	-740	BA
SE	STORGLACIAEREN	332	20150999	20160999	24C	67.9044	18.5542	1459	190	BA
SE	STORGLACIAEREN	332	20150999	20160999	22C	67.9042	18.559	1415	-1050	BA
SE	STORGLACIAEREN	332	20150999	20160999	21C	67.9041	18.5614	1407	-1150	BA
SE	STORGLACIAEREN	332	20150999	20160999	22S2	67.9024	18.5584	1405	-910	BA
SE	STORGLACIAEREN	332	20150999	20160999	20C	67.904	18.5637	1397	-750	BA
SE	STORGLACIAEREN	332	20150999	20160999	20S1	67.9031	18.5634	1394	-1160	BA
SE	STORGLACIAEREN	332	20150999	20160999	20N2	67.9057	18.5642	1394	-310	BA
SE	STORGLACIAEREN	332	20150999	20160999	20S5	67.8995	18.5623	1390	260	BA
SE	STORGLACIAEREN	332	20150999	20160999	20S2	67.9022	18.5631	1389	-1610	BA
SE	STORGLACIAEREN	332	20150999	20160999	19C	67.9038	18.5661	1387	-1210	BA
SE	STORGLACIAEREN	332	20150999	20160999	20S3	67.9013	18.5629	1384	-1630	BA
SE	STORGLACIAEREN	332	20150999	20160999	20S4	67.9004	18.5626	1381	-1170	BA
SE	STORGLACIAEREN	332	20150999	20160999	18S2	67.902	18.5679	1379	-1780	BA
SE	STORGLACIAEREN	332	20150999	20160999	18C	67.9037	18.5684	1379	-1360	BA
SE	STORGLACIAEREN	332	20150999	20160999	17C	67.9036	18.5708	1373	-1240	BA
SE	STORGLACIAEREN	332	20150999	20160999	18S5	67.8993	18.5671	1372	-1700	BA
SE	STORGLACIAEREN	332	20150999	20160999	18S4	67.9002	18.5673	1372	-1530	BA
SE	STORGLACIAEREN	332	20150999	20160999	16C	67.9035	18.5732	1367	-1650	BA
SE	STORGLACIAEREN	332	20150999	20160999	17N2	67.9054	18.5713	1364	-820	BA
SE	STORGLACIAEREN	332	20150999	20160999	17N3	67.9063	18.5716	1362	20	BA
SE	STORGLACIAEREN	332	20150999	20160999	15S1	67.9026	18.5752	1362	-1760	BA
SE	STORGLACIAEREN	332	20150999	20160999	15C	67.9034	18.5755	1361	-1610	BA
SE	STORGLACIAEREN	332	20150999	20160999	15S3	67.9008	18.5747	1358	-1890	BA
SE	STORGLACIAEREN	332	20150999	20160999	15S5	67.899	18.5742	1357	-970	BA
SE	STORGLACIAEREN	332	20150999	20160999	14C	67.9033	18.5779	1355	-1750	BA
SE	STORGLACIAEREN	332	20150999	20160999	15N2	67.9052	18.5761	1355	-1580	BA
SE	STORGLACIAEREN	332	20150999	20160999	15N3	67.9061	18.5763	1352	-800	BA
SE	STORGLACIAEREN	332	20150999	20160999	13C	67.9032	18.5803	1348	-1800	BA
SE	STORGLACIAEREN	332	20150999	20160999	12S1	67.9022	18.5824	1342	-1960	BA
SE	STORGLACIAEREN	332	20150999	20160999	12C	67.9032	18.5826	1341	-1960	BA
SE	STORGLACIAEREN	332	20150999	20160999	12S3	67.9005	18.5818	1340	-2010	BA
SE	STORGLACIAEREN	332	20150999	20160999	12N2	67.9049	18.5832	1338	-1520	BA
SE	STORGLACIAEREN	332	20150999	20160999	12S4	67.8996	18.5816	1338	-1880	BA
SE	STORGLACIAEREN	332	20150999	20160999	12N3	67.9058	18.5835	1332	-1030	BA
SE	STORGLACIAEREN	332	20150999	20160999	11C	67.903	18.585	1332	-1870	BA
SE	STORGLACIAEREN	332	20150999	20160999	10N1	67.9038	18.5876	1323	-2210	BA
SE	STORGLACIAEREN	332	20150999	20160999	10N2	67.9047	18.5879	1320	-2070	BA
SE	STORGLACIAEREN	332	20150999	20160999	10C	67.9029	18.5874	1320	-2130	BA
SE	STORGLACIAEREN	332	20150999	20160999	10S1	67.902	18.5871	1318	-1700	BA
SE	STORGLACIAEREN	332	20150999	20160999	10S2	67.9012	18.5868	1315	-1510	BA
SE	STORGLACIAEREN	332	20150999	20160999	10N3	67.9056	18.5882	1314	-1100	BA
SE	STORGLACIAEREN	332	20150999	20160999	10S3	67.9003	18.5865	1312	-1860	BA
SE	STORGLACIAEREN	332	20150999	20160999	09C	67.9028	18.5897	1305	-2110	BA
SE	STORGLACIAEREN	332	20150999	20160999	08C	67.9027	18.5921	1288	-2140	BA
SE	STORGLACIAEREN	332	20150999	20160999	08N2	67.9045	18.5927	1285	-1540	BA
SE	STORGLACIAEREN	332	20150999	20160999	08S1	67.9018	18.5918	1284	-2150	BA
SE	STORGLACIAEREN	332	20150999	20160999	08S3	67.9001	18.5913	1276	-1310	BA
SE	STORGLACIAEREN	332	20150999	20160999	07C	67.9026	18.5945	1271	-2430	BA
SE	STORGLACIAEREN	332	20150999	20160999	06S1	67.9016	18.5965	1259	-2390	BA
SE	STORGLACIAEREN	332	20150999	20160999	06S2	67.9007	18.5963	1257	-2360	BA
SE	STORGLACIAEREN	332	20150999	20160999	06C	67.9025	18.5968	1255	-2560	BA
SE	STORGLACIAEREN	332	20150999	20160999	06S3	67.8998	18.596	1250	-1900	BA
SE	STORGLACIAEREN	332	20150999	20160999	06N1	67.9034	18.5971	1245	-2080	BA
SE	STORGLACIAEREN	332	20150999	20160999	05C	67.9024	18.5992	1236	-2570	BA
SE	STORGLACIAEREN	332	20150999	20160999	04S2	67.9005	18.601	1222	-1530	BA
SE	STORGLACIAEREN	332	20150999	20160999	04S1	67.9014	18.6013	1220	-2250	BA
SE	STORGLACIAEREN	332	20150999	20160999	04C	67.9023	18.6016	1214	-1550	BA
SE	STORGLACIAEREN	332	20150999	20160999	04N1	67.9032	18.6018	1201	-1170	BA
SE	STORGLACIAEREN	332	20160999	20170914	32N9	67.9132	18.5378	1642	2310	BA
SE	STORGLACIAEREN	332	20160999	20170914	32N7	67.9114	18.5372	1619	2211	BA
SE	STORGLACIAEREN	332	20160999	20170914	32N5	67.9096	18.5367	1603	2068	BA
SE	STORGLACIAEREN	332	20160999	20170914	30N7	67.9112	18.542	1602	1843	BA
SE	STORGLACIAEREN	332	20160999	20170914	28N7	67.911	18.5467	1586	1436	BA
SE	STORGLACIAEREN	332	20160999	20170914	30N5	67.9094	18.5414	1579	1887	BA
SE	STORGLACIAEREN	332	20160999	20170914	28N5	67.9092	18.5462	1565	1216	BA
SE	STORGLACIAEREN	332	20160999	20170914	29S6	67.8995	18.5408	1564	2134	BA
SE	STORGLACIAEREN	332	20160999	20170914	26N5	67.909	18.5509	1544	605	BA
SE	STORGLACIAEREN	332	20160999	20170914	29S3	67.9022	18.5416	1512	2756	BA
SE	STORGLACIAEREN	332	20160999	20170914	25N3	67.9072	18.5527	1507	286	BA
SE	STORGLACIAEREN	332	20160999	20170914	29C	67.9049	18.5424	1503	2233	BA
SE	STORGLACIAEREN	332	20160999	20170914	27S4	67.9011	18.5461	1499	748	BA
SE	STORGLACIAEREN	332	20160999	20170914	27N2	67.9065	18.5477	1496	1166	BA
SE	STORGLACIAEREN	332	20160999	20170914	27C	67.9047	18.5472	1493	1452	BA
SE	STORGLACIAEREN	332	20160999	20170914	27S2	67.9029	18.5466	1491	1182	BA
SE	STORGLACIAEREN	332	20160999	20170914	25S4	67.9009	18.5508	1477	165	BA
SE	STORGLACIAEREN	332	20160999	20170914	24C	67.9044	18.5542	1456	424	BA
SE	STORGLACIAEREN	332	20160999	20170914	22C	67.9042	18.559	1414	50	BA
SE	STORGLACIAEREN	332	20160999	20170914	21C	67.9041	18.5614	1405	-92	BA
SE	STORGLACIAEREN	332	20160999	20170914	22S2	67.9024	18.5584	1399	143	BA
SE	STORGLACIAEREN	332	20160999	20170914	20C	67.904	18.5637	1395	77	BA
SE	STORGLACIAEREN	332	20160999	20170914	20S1	67.9031	18.5634	1392	-303	BA
SE	STORGLACIAEREN	332	20160999	20170914	20N2	67.9057	18.5642	1389	495	BA
SE	STORGLACIAEREN	332	20160999	20170914	20S2	67.9022	18.5631	1386	-550	BA
SE	STORGLACIAEREN	332	20160999	20170914	19C	67.9038	18.5661	1385	22	BA
SE	STORGLACIAEREN	332	20160999	20170914	20S3	67.9013	18.5629	1381	-917	BA
SE	STORGLACIAEREN	332	20160999	20170914	20S4	67.9004	18.5626	1379	-550	BA
SE	STORGLACIAEREN	332	20160999	20170914	18C	67.9037	18.5684	1377	-293	BA
SE	STORGLACIAEREN	332	20160999	20170914	18S2	67.902	18.5679	1376	-889	BA
SE	STORGLACIAEREN	332	20160999	20170914	17C	67.9036	18.5708	1370	-596	BA
SE	STORGLACIAEREN	332	20160999	20170914	18S4	67.9002	18.5673	1369	-889	BA
SE	STORGLACIAEREN	332	20160999	20170914	18S5	67.8993	18.5671	1369	116	BA

PU	GLACIER_NAME	WGMS_ID	FROM	TO	POINT_ID	LAT	LON	ELEV	MB	MB_CODE
SE	STORGLACIAEREN	332	20160999	20170914	16C	67.9035	18.5732	1364	-660	BA
SE	STORGLACIAEREN	332	20160999	20170914	17N2	67.9054	18.5713	1361	50	BA
SE	STORGLACIAEREN	332	20160999	20170914	17N3	67.9063	18.5716	1358	539	BA
SE	STORGLACIAEREN	332	20160999	20170914	15S1	67.9026	18.5752	1357	-697	BA
SE	STORGLACIAEREN	332	20160999	20170914	15C	67.9034	18.5755	1357	-660	BA
SE	STORGLACIAEREN	332	20160999	20170914	15S5	67.899	18.5742	1353	242	BA
SE	STORGLACIAEREN	332	20160999	20170914	15S3	67.9008	18.5747	1352	-1009	BA
SE	STORGLACIAEREN	332	20160999	20170914	15N2	67.9052	18.5761	1350	-422	BA
SE	STORGLACIAEREN	332	20160999	20170914	14C	67.9033	18.5779	1350	-697	BA
SE	STORGLACIAEREN	332	20160999	20170914	15N3	67.9061	18.5763	1349	-303	BA
SE	STORGLACIAEREN	332	20160999	20170914	13C	67.9032	18.5803	1342	-1045	BA
SE	STORGLACIAEREN	332	20160999	20170914	12S1	67.9022	18.5824	1336	-1302	BA
SE	STORGLACIAEREN	332	20160999	20170914	12C	67.9032	18.5826	1335	-1082	BA
SE	STORGLACIAEREN	332	20160999	20170914	12S3	67.9005	18.5818	1334	-1403	BA
SE	STORGLACIAEREN	332	20160999	20170914	12N2	67.9049	18.5832	1333	-1045	BA
SE	STORGLACIAEREN	332	20160999	20170914	12S4	67.8996	18.5816	1332	-587	BA
SE	STORGLACIAEREN	332	20160999	20170914	12N3	67.9058	18.5835	1328	99	BA
SE	STORGLACIAEREN	332	20160999	20170914	11C	67.903	18.585	1326	-1229	BA
SE	STORGLACIAEREN	332	20160999	20170914	10N1	67.9038	18.5876	1316	-1880	BA
SE	STORGLACIAEREN	332	20160999	20170914	10N2	67.9047	18.5879	1314	-1605	BA
SE	STORGLACIAEREN	332	20160999	20170914	10C	67.9029	18.5874	1313	-1440	BA
SE	STORGLACIAEREN	332	20160999	20170914	10S1	67.902	18.5871	1311	-596	BA
SE	STORGLACIAEREN	332	20160999	20170914	10S2	67.9012	18.5868	1309	-229	BA
SE	STORGLACIAEREN	332	20160999	20170914	10N3	67.9056	18.5882	1309	-229	BA
SE	STORGLACIAEREN	332	20160999	20170914	09C	67.9028	18.5897	1298	-1376	BA
SE	STORGLACIAEREN	332	20160999	20170914	08C	67.9027	18.5921	1281	-1229	BA
SE	STORGLACIAEREN	332	20160999	20170914	08N2	67.9045	18.5927	1280	341	BA
SE	STORGLACIAEREN	332	20160999	20170914	08S1	67.9018	18.5918	1277	-1431	BA
SE	STORGLACIAEREN	332	20160999	20170914	08S3	67.9001	18.5913	1270	-807	BA
SE	STORGLACIAEREN	332	20160999	20170914	07C	67.9026	18.5945	1264	-1531	BA
SE	STORGLACIAEREN	332	20160999	20170914	06S1	67.9016	18.5965	1251	-1586	BA
SE	STORGLACIAEREN	332	20160999	20170914	06S2	67.9007	18.5963	1249	-1531	BA
SE	STORGLACIAEREN	332	20160999	20170914	06C	67.9025	18.5968	1247	-1733	BA
SE	STORGLACIAEREN	332	20160999	20170914	06S3	67.8998	18.596	1243	-376	BA
SE	STORGLACIAEREN	332	20160999	20170914	06N1	67.9034	18.5971	1238	-825	BA
SE	STORGLACIAEREN	332	20160999	20170914	05C	67.9024	18.5992	1228	-1458	BA
SE	STORGLACIAEREN	332	20160999	20170914	04C	67.9023	18.6016	1206	-1504	BA
SJ - Svalbard (Norway)										
SJ	KONGSVEGEN	1456	20150999	20160412	KNG-9_2016			726	910	BW
SJ	KONGSVEGEN	1456	20150999	20160412	KNG_7N2_2012			717	630	BW
SJ	KONGSVEGEN	1456	20150999	20160908	KNG_7N2_2012			717	200	BA
SJ	KONGSVEGEN	1456	20150999	20160412	KNG-8_5_2015			707	910	BW
SJ	KONGSVEGEN	1456	20150999	20160908	KNG-8_5_2015			707	1220	BA
SJ	KONGSVEGEN	1456	20150999	20160908	KNG-8_2016			670	800	BA
SJ	KONGSVEGEN	1456	20150999	20160412	KNG-8_2016			670	830	BW
SJ	KONGSVEGEN	1456	20150999	20160908	KNG_7N1_2012			640	170	BA
SJ	KONGSVEGEN	1456	20150999	20160412	KNG_7N1_2012			640	710	BW
SJ	KONGSVEGEN	1456	20150999	20160412	KNG-7_5_2014			638	790	BW
SJ	KONGSVEGEN	1456	20150999	20160908	KNG-7_5_2014			638	400	BA
SJ	KONGSVEGEN	1456	20150999	20160412	KNG-7_2014			593	700	BW
SJ	KONGSVEGEN	1456	20150999	20160908	KNG-7_2014			593	110	BA
SJ	KONGSVEGEN	1456	20150999	20160908	KNG-65-2004			560	-170	BA
SJ	KONGSVEGEN	1456	20150999	20160412	KNG-65-2004			560	620	BW
SJ	KONGSVEGEN	1456	20150999	20160412	KNG-6			532	520	BW
SJ	KONGSVEGEN	1456	20150999	20160908	KNG-6			532	-440	BA
SJ	KONGSVEGEN	1456	20150999	20160412	KNG-55_2007			500	460	BW
SJ	KONGSVEGEN	1456	20150999	20160908	KNG-55_2007			500	-830	BA
SJ	KONGSVEGEN	1456	20150999	20160908	KNG-5_2007			461	-890	BA
SJ	KONGSVEGEN	1456	20150999	20160412	KNG-5_2007			461	450	BW
SJ	KONGSVEGEN	1456	20150999	20160908	KNG-45_2012			417	-1130	BA
SJ	KONGSVEGEN	1456	20150999	20160412	KNG-45_2012			417	480	BW
SJ	KONGSVEGEN	1456	20150999	20160412	KNG-4_2013			390	330	BW
SJ	KONGSVEGEN	1456	20150999	20160908	KNG-4_2013			390	-1470	BA
SJ	KONGSVEGEN	1456	20150999	20160412	KNG-35_2015			354	270	BW
SJ	KONGSVEGEN	1456	20150999	20160908	KNG-35_2015			354	-1650	BA
SJ	KONGSVEGEN	1456	20150999	20160412	KNG-3_2015			321	240	BW
SJ	KONGSVEGEN	1456	20150999	20160908	KNG-3_2015			321	-1790	BA
SJ	KONGSVEGEN	1456	20150999	20160412	KNG-25_2016			275	180	BW
SJ	KONGSVEGEN	1456	20150999	20160908	KNG-25_2016			275	-2220	BA
SJ	KONGSVEGEN	1456	20150999	20160412	KNG-2_2015			220	90	BW
SJ	KONGSVEGEN	1456	20150999	20160908	KNG-2_2015			220	-2410	BA
SJ	KONGSVEGEN	1456	20150999	20160412	KNG-1_2016			135	80	BW
SJ	KONGSVEGEN	1456	20150999	20160908	KNG-1_2016			135	-2670	BA
SJ	KONGSVEGEN	1456	20150999	20160908	KNG-0_2016			85	-2600	BA
SJ	KONGSVEGEN	1456	20150999	20160412	KNG-0_2016			85	0	BW
SJ	KONGSVEGEN	1456	20160908	20170914	KNG-9_2017			727	1050	BA
SJ	KONGSVEGEN	1456	20160908	20170415	KNG-9_2017			727	920	BW
SJ	KONGSVEGEN	1456	20160908	20170914	KNG_7N2_2012			717	320	BA
SJ	KONGSVEGEN	1456	20160908	20170415	KNG_7N2_2012			717	750	BW
SJ	KONGSVEGEN	1456	20160908	20170914	KNG_85_2016			707	870	BA
SJ	KONGSVEGEN	1456	20160908	20170415	KNG_85_2016			707	930	BW
SJ	KONGSVEGEN	1456	20160908	20170415	KNG_8_2016			670	1010	BW
SJ	KONGSVEGEN	1456	20160908	20170914	KNG_8_2016			670	1000	BA
SJ	KONGSVEGEN	1456	20160908	20170914	KNG_7N1_2012			640	210	BA
SJ	KONGSVEGEN	1456	20160908	20170415	KNG_7N1_2012			640	840	BW
SJ	KONGSVEGEN	1456	20160908	20170914	KNG_75_2016			638	460	BA
SJ	KONGSVEGEN	1456	20160908	20170415	KNG_75_2016			638	860	BW
SJ	KONGSVEGEN	1456	20160908	20170914	KNG-7_2017			593	210	BA
SJ	KONGSVEGEN	1456	20160908	20170415	KNG-7_2017			593	800	BW
SJ	KONGSVEGEN	1456	20160908	20170415	KNG_65_2016			560	730	BW
SJ	KONGSVEGEN	1456	20160908	20170914	KNG_65_2016			560	30	BA
SJ	KONGSVEGEN	1456	20160908	20170914	KNG_6_2016			532	90	BA
SJ	KONGSVEGEN	1456	20160908	20170415	KNG_6_2016			532	710	BW
SJ	KONGSVEGEN	1456	20160908	20170914	KNG_55_2007			499	-350	BA
SJ	KONGSVEGEN	1456	20160908	20170415	KNG_55_2007			499	650	BW

PU	GLACIER_NAME	WGMS_ID	FROM	TO	POINT_ID	LAT	LON	ELEV	MB	MB_CODE
SJ	KONGSVEGEN	1456	20160908	20170914	KNG_5_2014			460	-220	BA
SJ	KONGSVEGEN	1456	20160908	20170415	KNG_5_2014			460	650	BW
SJ	KONGSVEGEN	1456	20160908	20170415	KNG-4_5_2017			416	560	BW
SJ	KONGSVEGEN	1456	20160908	20170914	KNG-4_5_2017			416	-560	BA
SJ	KONGSVEGEN	1456	20160908	20170415	KNG-4_2017			389	490	BW
SJ	KONGSVEGEN	1456	20160908	20170914	KNG-4_2017			389	-520	BA
SJ	KONGSVEGEN	1456	20160908	20170415	KNG_35_2015			352	440	BW
SJ	KONGSVEGEN	1456	20160908	20170914	KNG_35_2015			352	-960	BA
SJ	KONGSVEGEN	1456	20160908	20170914	KNG-3_2017			319	-850	BA
SJ	KONGSVEGEN	1456	20160908	20170415	KNG-3_2017			319	400	BW
SJ	KONGSVEGEN	1456	20160908	20170914	KNG_25_2016			271	-1160	BA
SJ	KONGSVEGEN	1456	20160908	20170415	KNG_25_2016			271	300	BW
SJ	KONGSVEGEN	1456	20160908	20170914	KNG-2_2017			218	-1760	BA
SJ	KONGSVEGEN	1456	20160908	20170415	KNG-2_2017			218	200	BW
SJ	KONGSVEGEN	1456	20160908	20170914	KNG_1_2016			131	-1940	BA
SJ	KONGSVEGEN	1456	20160908	20170415	KNG_1_2016			131	0	BW
SJ	KONGSVEGEN	1456	20160908	20170914	KNG-0_2017			95	-2100	BA
SJ	KONGSVEGEN	1456	20160908	20170415	KNG-0_2017			95	0	BW
SJ	NORDENSKIOELDBREEN	3479	20160411	20169999	S11	78.8114	17.454	1147	190	BS
SJ	NORDENSKIOELDBREEN	3479	20159999	20169999	S11	78.8114	17.454	1147	940	BA
SJ	NORDENSKIOELDBREEN	3479	20159999	20160411	S11	78.8114	17.454	1147	750	BW
SJ	NORDENSKIOELDBREEN	3479	20160411	20169999	S10	78.79	17.4496	1053	560	BS
SJ	NORDENSKIOELDBREEN	3479	20159999	20169999	S10	78.79	17.4496	1053	1340	BA
SJ	NORDENSKIOELDBREEN	3479	20159999	20160411	S10	78.79	17.4496	1053	780	BW
SJ	NORDENSKIOELDBREEN	3479	20159999	20169999	S9	78.7586	17.401	822	990	BA
SJ	NORDENSKIOELDBREEN	3479	20160411	20169999	S9	78.7586	17.401	822	210	BS
SJ	NORDENSKIOELDBREEN	3479	20159999	20160411	S9	78.7586	17.401	822	780	BW
SJ	NORDENSKIOELDBREEN	3479	20160410	20169999	S8	78.7383	17.3245	667	260	BS
SJ	NORDENSKIOELDBREEN	3479	20159999	20169999	S8	78.7383	17.3245	667	980	BA
SJ	NORDENSKIOELDBREEN	3479	20159999	20160410	S8	78.7383	17.3245	667	720	BW
SJ	NORDENSKIOELDBREEN	3479	20160409	20169999	S7	78.7212	17.253	584	-940	BS
SJ	NORDENSKIOELDBREEN	3479	20159999	20169999	S7	78.7212	17.253	584	-410	BA
SJ	NORDENSKIOELDBREEN	3479	20159999	20160409	S7	78.7212	17.253	584	530	BW
SJ	NORDENSKIOELDBREEN	3479	20159999	20160409	S6	78.6942	17.1581	529	330	BW
SJ	NORDENSKIOELDBREEN	3479	20160409	20169999	S6	78.6942	17.1581	529	-1520	BS
SJ	NORDENSKIOELDBREEN	3479	20159999	20169999	S6	78.6942	17.1581	529	-1190	BA
SJ	NORDENSKIOELDBREEN	3479	20159999	20169999	S5	78.675	17.1623	456	-1410	BA
SJ	NORDENSKIOELDBREEN	3479	20159999	20160410	S5	78.675	17.1623	456	160	BW
SJ	NORDENSKIOELDBREEN	3479	20160410	20169999	S5	78.675	17.1623	456	-1570	BS
SJ	NORDENSKIOELDBREEN	3479	20159999	20160410	S2	78.6329	17.067	230	70	BW
SJ	NORDENSKIOELDBREEN	3479	20160410	20169999	S2	78.6329	17.067	230	-2530	BS
SJ	NORDENSKIOELDBREEN	3479	20159999	20169999	S2	78.6329	17.067	230	-2460	BA
SJ	NORDENSKIOELDBREEN	3479	20169999	20170425	S11	78.8114	17.454	1147	990	BW
SJ	NORDENSKIOELDBREEN	3479	20170425	20179999	S11	78.8114	17.454	1147	560	BS
SJ	NORDENSKIOELDBREEN	3479	20169999	20179999	S11	78.8114	17.454	1147	1550	BA
SJ	NORDENSKIOELDBREEN	3479	20170425	20179999	S10	78.79	17.4496	1053	550	BS
SJ	NORDENSKIOELDBREEN	3479	20169999	20179999	S10	78.79	17.4496	1053	1260	BA
SJ	NORDENSKIOELDBREEN	3479	20169999	20170425	S10	78.79	17.4496	1053	710	BW
SJ	NORDENSKIOELDBREEN	3479	20169999	20170424	S7	78.7212	17.253	584	490	BW
SJ	NORDENSKIOELDBREEN	3479	20170424	20179999	S7	78.7212	17.253	584	-420	BS
SJ	NORDENSKIOELDBREEN	3479	20169999	20179999	S7	78.7212	17.253	584	70	BA
SJ	NORDENSKIOELDBREEN	3479	20170424	20179999	S6	78.6942	17.1581	529	-810	BS
SJ	NORDENSKIOELDBREEN	3479	20169999	20179999	S6	78.6942	17.1581	529	-450	BA
SJ	NORDENSKIOELDBREEN	3479	20169999	20170424	S6	78.6942	17.1581	529	360	BW
SJ	NORDENSKIOELDBREEN	3479	20169999	20179999	S5	78.675	17.1623	456	10	BA
SJ	NORDENSKIOELDBREEN	3479	20169999	20170424	S5	78.675	17.1623	456	420	BW
SJ	NORDENSKIOELDBREEN	3479	20170424	20179999	S5	78.675	17.1623	456	-410	BS
SJ	NORDENSKIOELDBREEN	3479	20170425	20179999	S3S	78.6302	17.1339	350	-1300	BS
SJ	NORDENSKIOELDBREEN	3479	20169999	20179999	S3S	78.6302	17.1339	350	-970	BA
SJ	NORDENSKIOELDBREEN	3479	20169999	20170425	S3S	78.6302	17.1339	350	330	BW
SJ	NORDENSKIOELDBREEN	3479	20169999	20179999	S2	78.6329	17.067	230	-1700	BA
SJ	NORDENSKIOELDBREEN	3479	20169999	20170424	S2	78.6329	17.067	230	50	BW
SJ	NORDENSKIOELDBREEN	3479	20170424	20179999	S2	78.6329	17.067	230	-1750	BS
SJ	WALDEMARBREEN	2307	20150999	20160999	18			428	-828	BA
SJ	WALDEMARBREEN	2307	20150999	20160999	17			364	-1602	BA
SJ	WALDEMARBREEN	2307	20150999	20160999	16			346	-1456	BA
SJ	WALDEMARBREEN	2307	20150999	20160999	15			319	-1775	BA
SJ	WALDEMARBREEN	2307	20150999	20160999	14			297	-1775	BA
SJ	WALDEMARBREEN	2307	20150999	20160999	13			274	-1702	BA
SJ	WALDEMARBREEN	2307	20150999	20160999	12			266	-1911	BA
SJ	WALDEMARBREEN	2307	20150999	20160999	11			262	-2062	BA
SJ	WALDEMARBREEN	2307	20150999	20160999	10			241	-1902	BA
SJ	WALDEMARBREEN	2307	20150999	20160999	9			229	-1884	BA
SJ	WALDEMARBREEN	2307	20150999	20160999	8			208	-2821	BA
SJ	WALDEMARBREEN	2307	20150999	20160999	7			207	-2275	BA
SJ	WALDEMARBREEN	2307	20150999	20160999	6			180	-3021	BA
SJ	WALDEMARBREEN	2307	20150999	20160999	5			172	-2848	BA
SJ	WALDEMARBREEN	2307	20150999	20160999	4			159	-3049	BA
SJ	WALDEMARBREEN	2307	20150999	20160999	3			157	-2830	BA
SJ	WALDEMARBREEN	2307	20150999	20160999	2			140	-3203	BA
SJ	WALDEMARBREEN	2307	20150999	20160999	1			129	-3221	BA
SJ	WALDEMARBREEN	2307	20160999	20170999	19			426	-464	BA
SJ	WALDEMARBREEN	2307	20160999	20170999	18			386	-664	BA
SJ	WALDEMARBREEN	2307	20160999	20170999	17			363	-983	BA
SJ	WALDEMARBREEN	2307	20160999	20170999	16			345	-1229	BA
SJ	WALDEMARBREEN	2307	20160999	20170999	15			318	-1593	BA
SJ	WALDEMARBREEN	2307	20160999	20170999	14			295	-1392	BA
SJ	WALDEMARBREEN	2307	20160999	20170999	13			264	-1538	BA
SJ	WALDEMARBREEN	2307	20160999	20170999	12			260	-1529	BA
SJ	WALDEMARBREEN	2307	20160999	20170999	11			238	-1875	BA
SJ	WALDEMARBREEN	2307	20160999	20170999	10			227	-1629	BA
SJ	WALDEMARBREEN	2307	20160999	20170999	9			206	-1875	BA
SJ	WALDEMARBREEN	2307	20160999	20170999	8			204	-1838	BA
SJ	WALDEMARBREEN	2307	20160999	20170999	7			202	-2157	BA
SJ	WALDEMARBREEN	2307	20160999	20170999	6			180	-2821	BA
SJ	WALDEMARBREEN	2307	20160999	20170999	5			171	-2603	BA

PU	GLACIER_NAME	WGMS_ID	FROM	TO	POINT_ID	LAT	LON	ELEV	MB	MB_CODE
SJ	WALDEMARBREEN	2307	20160999	20170999	4			158	-2493	BA
SJ	WALDEMARBREEN	2307	20160999	20170999	3			154	-2776	BA
SJ	WALDEMARBREEN	2307	20160999	20170999	2			137	-3103	BA
SJ	WALDEMARBREEN	2307	20160999	20170999	1			126	-3786	BA
US - United States of America										
US	BLACK RAPIDS	80	20159999	20169999	8km	63.43684	-146.5005	1891	-86	IN
US	BLACK RAPIDS	80	20159999	20169999	14km	63.48159	-146.50117	1713	-2104	IN
US	BLUE GLACIER	210	20150928	20160927	2	47.8074	-123.7079	2135	860	BA
US	BLUE GLACIER	210	20160526	20160927	2	47.8074	-123.7079	2135	-3040	BS
US	BLUE GLACIER	210	20150928	20160526	2	47.8074	-123.7079	2135	3890	BW
US	BLUE GLACIER	210	20160526	20160927	3	47.8154	-123.7042	2049	-3090	BS
US	BLUE GLACIER	210	20150928	20160927	3	47.8154	-123.7042	2049	690	BA
US	BLUE GLACIER	210	20150928	20160526	3	47.8154	-123.7042	2049	3780	BW
US	BLUE GLACIER	210	20150928	20160927	4	47.8088	-123.6917	1720	-4540	BA
US	BLUE GLACIER	210	20160526	20160927	4	47.8088	-123.6917	1720	-6180	BS
US	BLUE GLACIER	210	20150928	20160526	4	47.8088	-123.6917	1720	1640	BW
US	BLUE GLACIER	210	20150928	20160526	5	47.8172	-123.6846	1588	1640	BW
US	BLUE GLACIER	210	20150928	20160927	5	47.8172	-123.6846	1588	-4860	BA
US	BLUE GLACIER	210	20160526	20160927	5	47.8172	-123.6846	1588	-6510	BS
US	BLUE GLACIER	210	20150928	20160526	6	47.8242	-123.6904	1471	1500	BW
US	BLUE GLACIER	210	20150928	20160927	6	47.8242	-123.6904	1471	-6560	BA
US	BLUE GLACIER	210	20160526	20160927	6	47.8242	-123.6904	1471	-8050	BS
US	EEL	188	20160526	20160927	1	47.7224	-123.3394	1943	-3360	BS
US	EEL	188	20150928	20160927	1	47.7224	-123.3394	1943	1410	BA
US	EEL	188	20150928	20160526	1	47.7224	-123.3394	1943	4770	BW
US	EEL	188	20160526	20160927	2	47.7256	-123.3398	1855	-3590	BS
US	EEL	188	20150928	20160927	2	47.7256	-123.3398	1855	-330	BA
US	EEL	188	20150928	20160526	2	47.7256	-123.3398	1855	3260	BW
US	EEL	188	20150928	20160927	3	47.7295	-123.3402	1767	-1720	BA
US	EEL	188	20150928	20160526	3	47.7295	-123.3402	1767	2810	BW
US	EEL	188	20160526	20160927	3	47.7295	-123.3402	1767	-4530	BS
US	EEL	188	20150928	20160526	4	47.7326	-123.3422	1684	3230	BW
US	EEL	188	20150928	20160927	4	47.7326	-123.3422	1684	-2660	BA
US	EEL	188	20160526	20160927	4	47.7326	-123.3422	1684	-5890	BS
US	EMMONS	203	20150928	20160621	1A	46.8704	-121.7338	2902	3750	BW
US	EMMONS	203	20150928	20160913	1A	46.8704	-121.7338	2902	2020	BA
US	EMMONS	203	20160621	20160913	1A	46.8704	-121.7338	2902	-1730	BS
US	EMMONS	203	20150928	20160621	2	46.8695	-121.7288	2806	3530	BW
US	EMMONS	203	20150928	20160913	2	46.8695	-121.7288	2806	1490	BA
US	EMMONS	203	20160621	20160913	2	46.8695	-121.7288	2806	-2050	BS
US	EMMONS	203	20151006	20160501	3	46.8718	-121.6963	1970	1880	BW
US	EMMONS	203	20151006	20161010	3	46.8718	-121.6963	1970	-4460	BA
US	EMMONS	203	20160501	20161010	3	46.8718	-121.6963	1970	-6340	BS
US	EMMONS	203	20151006	20160501	4	46.8789	-121.6799	1723	1140	BW
US	EMMONS	203	20160501	20161010	4	46.8789	-121.6799	1723	-9090	BS
US	EMMONS	203	20151006	20161010	4	46.8789	-121.6799	1723	-7950	BA
US	EMMONS	203	20151006	20161010	4A	46.8809	-121.6804	1718	-940	BA
US	EMMONS	203	20151006	20160501	4A	46.8809	-121.6804	1718	430	BW
US	EMMONS	203	20160501	20161010	4A	46.8809	-121.6804	1718	-1370	BS
US	EMMONS	203	20151006	20161010	5	46.8876	-121.6751	1563	-1280	BA
US	EMMONS	203	20160501	20161010	5	46.8876	-121.6751	1563	-1550	BS
US	EMMONS	203	20151006	20160501	5	46.8876	-121.6751	1563	260	BW
US	GULKANA	90	20150924	20160412	D	63.28489	-145.38504	1844	1150	BW
US	GULKANA	90	20160412	20160827	D	63.28489	-145.38504	1844	-1730	BS
US	GULKANA	90	20150924	20160827	D	63.28489	-145.38504	1844	-1730	BA
US	GULKANA	90	20150923	20160827	B	63.28551	-145.41034	1680	-1250	BA
US	GULKANA	90	20150923	20160412	B	63.28551	-145.41034	1680	1080	BW
US	GULKANA	90	20160412	20160827	B	63.28551	-145.41034	1680	-2330	BS
US	GULKANA	90	20160413	20160828	AU	63.2649	-145.41676	1446	-4010	BS
US	GULKANA	90	20150923	20160828	AU	63.2649	-145.41676	1446	-3270	BA
US	GULKANA	90	20150923	20160413	AU	63.2649	-145.41676	1446	740	BW
US	GULKANA	90	20160827	20170419	D	63.28489	-145.38504	1841	650	BW
US	GULKANA	90	20170419	20170823	D	63.28489	-145.38504	1841	-1340	BS
US	GULKANA	90	20160827	20170823	D	63.28489	-145.38504	1841	-1340	BA
US	GULKANA	90	20170419	20170823	B	63.28551	-145.41034	1680	-2390	BS
US	GULKANA	90	20160827	20170823	B	63.28551	-145.41034	1680	-1890	BA
US	GULKANA	90	20160827	20170419	B	63.28551	-145.41034	1680	500	BW
US	GULKANA	90	20170421	20170822	AU	63.2649	-145.41676	1445	-3760	BS
US	GULKANA	90	20160828	20170421	AU	63.2649	-145.41676	1445	330	BW
US	GULKANA	90	20160828	20170822	AU	63.2649	-145.41676	1445	-3430	BA
US	LEMON CREEK	3334	20160321	20160910	E	58.3616	-134.3374	1238	-2850	BS
US	LEMON CREEK	3334	20151002	20160910	E	58.3616	-134.3374	1238	400	BA
US	LEMON CREEK	3334	20160321	20160910	D	58.3651	-134.355	1176	-3060	BS
US	LEMON CREEK	3334	20151002	20160910	D	58.3651	-134.355	1176	-580	BA
US	LEMON CREEK	3334	20160323	20160911	C	58.3809	-134.346	1066	-3700	BS
US	LEMON CREEK	3334	20151002	20160911	C	58.3809	-134.346	1066	-1130	BA
US	LEMON CREEK	3334	20151002	20160911	B	58.3933	-134.352	945	-2500	BA
US	LEMON CREEK	3334	20160324	20160911	B	58.3933	-134.352	945	-4600	BS
US	LEMON CREEK	3334	20151002	20160911	A	58.4006	-134.3619	825	-3900	BA
US	LEMON CREEK	3334	20160324	20160911	A	58.4006	-134.3619	825	-5220	BS
US	LEMON CREEK	3334	20160910	20171008	E	58.3616	-134.3374	1235	450	BA
US	LEMON CREEK	3334	20170410	20171008	E	58.3616	-134.3374	1235	-3530	BS
US	LEMON CREEK	3334	20170407	20171007	D	58.3651	-134.355	1173	-3450	BS
US	LEMON CREEK	3334	20160910	20171007	D	58.3651	-134.355	1173	-730	BA
US	LEMON CREEK	3334	20160911	20171007	C	58.3809	-134.346	1063	-1090	BA
US	LEMON CREEK	3334	20170409	20171007	C	58.3809	-134.346	1063	-3630	BS
US	LEMON CREEK	3334	20160911	20171007	B	58.3933	-134.352	942	-2880	BA
US	LEMON CREEK	3334	20170409	20171007	B	58.3933	-134.352	942	-4860	BS
US	LEMON CREEK	3334	20160911	20171007	A	58.4006	-134.3619	821	-4230	BA
US	LEMON CREEK	3334	20170408	20171007	A	58.4006	-134.3619	821	-5430	BS
US	NISQUALLY	201	20160511	20160913	2	46.8323	-121.7339	3959	-2380	BS
US	NISQUALLY	201	20150922	20160913	2	46.8323	-121.7339	3959	1000	BA
US	NISQUALLY	201	20150922	20160511	2	46.8323	-121.7339	3959	3380	BW
US	NISQUALLY	201	20160511	20160913	1	46.8452	-121.7351	3387	-1600	BS
US	NISQUALLY	201	20150922	20160913	1	46.8452	-121.7351	3387	1030	BA

PU	GLACIER_NAME	WGMS_ID	FROM	TO	POINT_ID	LAT	LON	ELEV	MB	MB_CODE
US	NISQUALLY	201	20150922	20160511	1	46.8452	-121.7351	3387	2630	BW
US	NISQUALLY	201	20150926	20161010	3	46.8178	-121.7401	2164	-980	BA
US	NISQUALLY	201	20150926	20160411	3	46.8178	-121.7401	2164	4110	BW
US	NISQUALLY	201	20160411	20161010	3	46.8178	-121.7401	2164	-5090	BS
US	NISQUALLY	201	20150926	20160411	4A	46.8064	-121.7387	1856	2730	BW
US	NISQUALLY	201	20150926	20161010	4A	46.8064	-121.7387	1856	-690	BA
US	NISQUALLY	201	20160411	20161010	4A	46.8064	-121.7387	1856	-3430	BS
US	NISQUALLY	201	20160411	20161010	4	46.8072	-121.7423	1843	-7100	BS
US	NISQUALLY	201	20150926	20160411	4	46.8072	-121.7423	1843	3340	BW
US	NISQUALLY	201	20150926	20161010	4	46.8072	-121.7423	1843	-3760	BA
US	NISQUALLY	201	20160411	20161010	5	46.8024	-121.742	1759	-3000	BS
US	NISQUALLY	201	20151005	20161010	5	46.8024	-121.742	1759	-1670	BA
US	NISQUALLY	201	20151005	20160411	5	46.8024	-121.742	1759	1340	BW
US	NOISY CREEK	1666	20150922	20160521	2W	48.6698	-121.53	1818	3540	BW
US	NOISY CREEK	1666	20150922	20160926	2W	48.6698	-121.53	1818	-100	BA
US	NOISY CREEK	1666	20160521	20160926	2W	48.6698	-121.53	1818	-3640	BS
US	NOISY CREEK	1666	20150922	20160521	3	48.6723	-121.5286	1772	2560	BW
US	NOISY CREEK	1666	20150922	20160926	3	48.6723	-121.5286	1772	-970	BA
US	NOISY CREEK	1666	20160521	20160926	3	48.6723	-121.5286	1772	-3530	BS
US	NOISY CREEK	1666	20150922	20160521	4	48.6743	-121.5276	1740	2760	BW
US	NOISY CREEK	1666	20150922	20160926	4	48.6743	-121.5276	1740	-1220	BA
US	NOISY CREEK	1666	20160521	20160926	4	48.6743	-121.5276	1740	-3980	BS
US	NOISY CREEK	1666	20160521	20160926	5	48.6761	-121.5272	1704	-4410	BS
US	NOISY CREEK	1666	20150922	20160521	5	48.6761	-121.5272	1704	2740	BW
US	NOISY CREEK	1666	20150922	20160926	5	48.6761	-121.5272	1704	-1680	BA
US	NORTH KLAWATTI	1664	20150923	20160926	1	48.5779	-121.106	2312	860	BA
US	NORTH KLAWATTI	1664	20150923	20160521	1	48.5779	-121.106	2312	3920	BW
US	NORTH KLAWATTI	1664	20160521	20160926	1	48.5779	-121.106	2205	-3070	BS
US	NORTH KLAWATTI	1664	20150923	20160521	2	48.5736	-121.0985	2205	2180	BW
US	NORTH KLAWATTI	1664	20150923	20160926	2	48.5736	-121.0985	2205	-1210	BA
US	NORTH KLAWATTI	1664	20160521	20160926	2	48.5736	-121.0985	2196	-3390	BS
US	NORTH KLAWATTI	1664	20150923	20160521	3	48.5709	-121.0934	2080	3130	BW
US	NORTH KLAWATTI	1664	20150923	20160926	3	48.5709	-121.0934	2080	-850	BA
US	NORTH KLAWATTI	1664	20160521	20160926	3	48.5709	-121.0934	2080	-3980	BS
US	NORTH KLAWATTI	1664	20150923	20160521	4	48.571	-121.0874	1916	2180	BW
US	NORTH KLAWATTI	1664	20160521	20160926	4	48.571	-121.0874	1916	-5510	BS
US	NORTH KLAWATTI	1664	20150923	20160926	4	48.571	-121.0874	1916	-3340	BA
US	NORTH KLAWATTI	1664	20160521	20160926	5	48.5683	-121.0831	1826	-6720	BS
US	NORTH KLAWATTI	1664	20150923	20160521	5	48.5683	-121.0831	1826	1830	BW
US	NORTH KLAWATTI	1664	20150923	20160926	5	48.5683	-121.0831	1826	-4890	BA
US	SANDALEE	1667	20150922	20160926	1	48.407	-120.7902	2254	600	BA
US	SANDALEE	1667	20160521	20160926	1	48.407	-120.7902	2254	-2350	BS
US	SANDALEE	1667	20150922	20160521	1	48.407	-120.7902	2254	2940	BW
US	SANDALEE	1667	20150922	20160926	2	48.4091	-120.7889	2178	590	BA
US	SANDALEE	1667	20160521	20160926	2	48.4091	-120.7889	2178	-2450	BS
US	SANDALEE	1667	20150922	20160521	2	48.4091	-120.7889	2178	3030	BW
US	SANDALEE	1667	20160521	20160926	3	48.4106	-120.7893	2082	-3850	BS
US	SANDALEE	1667	20150922	20160926	3	48.4106	-120.7893	2082	-1080	BA
US	SANDALEE	1667	20150922	20160521	3	48.4106	-120.7893	2082	2770	BW
US	SANDALEE	1667	20150922	20160521	4	48.4125	-120.7901	1996	3040	BW
US	SANDALEE	1667	20160521	20160926	4	48.4125	-120.7901	1996	-3460	BS
US	SANDALEE	1667	20150922	20160926	4	48.4125	-120.7901	1996	-420	BA
US	SILVER	1665	20160522	20160926	1	48.9721	-121.238	2538	-1410	BS
US	SILVER	1665	20150923	20160522	1	48.9721	-121.238	2538	2840	BW
US	SILVER	1665	20150923	20160926	1	48.9721	-121.238	2538	1430	BA
US	SILVER	1665	20150923	20160522	2	48.9737	-121.2406	2402	2450	BW
US	SILVER	1665	20150923	20160926	3	48.9741	-121.2434	2288	780	BA
US	SILVER	1665	20160522	20160926	3	48.9741	-121.2434	2288	-2500	BS
US	SILVER	1665	20150923	20160522	3	48.9741	-121.2434	2288	3280	BW
US	SILVER	1665	20160522	20160926	4	48.9755	-121.2445	2198	-2820	BS
US	SILVER	1665	20150923	20160926	4	48.9755	-121.2445	2198	-570	BA
US	SILVER	1665	20150923	20160522	4	48.9755	-121.2445	2198	2250	BW
US	SOUTH CASCADE	205	20160428	20161011	P1	48.3583	-121.0598	1826	-3980	BS
US	SOUTH CASCADE	205	20150930	20161011	P1	48.3583	-121.0598	1826	-1570	BA
US	SOUTH CASCADE	205	20150930	20160428	P1	48.3583	-121.0598	1826	2410	BW
US	SOUTH CASCADE	205	20150930	20160428	E	48.363	-121.062	1238	3270	BW
US	SOUTH CASCADE	205	20160428	20161011	E	48.363	-121.062	1238	-7540	BS
US	SOUTH CASCADE	205	20150930	20161011	E	48.363	-121.062	1238	-4270	BA
US	SOUTH CASCADE	205	20150819	20160427	C	48.3517	-121.0555	1066	2860	BW
US	SOUTH CASCADE	205	20150819	20161011	C	48.3517	-121.0555	1066	-760	BA
US	SOUTH CASCADE	205	20160427	20161011	C	48.3517	-121.0555	1066	-3620	BS
US	SOUTH CASCADE	205	20150930	20160427	B	48.3475	-121.0519	945	3700	BW
US	SOUTH CASCADE	205	20150930	20161011	B	48.3475	-121.0519	945	1920	BA
US	SOUTH CASCADE	205	20160427	20161011	B	48.3475	-121.0519	945	-1780	BS
US	SOUTH CASCADE	205	20150930	20160427	A	48.3486	-121.0461	825	3350	BW
US	SOUTH CASCADE	205	20150930	20161011	A	48.3486	-121.0461	825	-320	BA
US	SOUTH CASCADE	205	20160427	20161011	A	48.3486	-121.0461	825	-3670	BS
US	SOUTH CASCADE	205	20170424	20171003	P1	48.3583	-121.0598	1826	-4540	BS
US	SOUTH CASCADE	205	20161011	20170424	P1	48.3583	-121.0598	1826	3520	BW
US	SOUTH CASCADE	205	20161011	20171003	P1	48.3583	-121.0598	1826	-1020	BA
US	SOUTH CASCADE	205	20161011	20171005	E	48.363	-121.062	1235	-4280	BA
US	SOUTH CASCADE	205	20161011	20170425	E	48.363	-121.062	1235	2920	BW
US	SOUTH CASCADE	205	20170425	20171005	E	48.363	-121.062	1235	-7200	BS
US	SOUTH CASCADE	205	20161011	20170423	C	48.3517	-121.0555	1063	3760	BW
US	SOUTH CASCADE	205	20161011	20171004	C	48.3517	-121.0555	1063	-490	BA
US	SOUTH CASCADE	205	20170423	20171004	C	48.3517	-121.0555	1063	-4250	BS
US	SOUTH CASCADE	205	20161011	20171004	B	48.3475	-121.0519	942	1600	BA
US	SOUTH CASCADE	205	20170423	20171004	B	48.3475	-121.0519	942	-3470	BS
US	SOUTH CASCADE	205	20161011	20170423	B	48.3475	-121.0519	942	5070	BW
US	SOUTH CASCADE	205	20161011	20171004	A	48.3486	-121.0461	821	-70	BA
US	SOUTH CASCADE	205	20170423	20171004	A	48.3486	-121.0461	821	-3830	BS
US	SOUTH CASCADE	205	20161011	20170423	A	48.3486	-121.0461	821	3760	BW
US	SPERRY	218	20160513	20160920	8	48.6195	-113.757	2582	-2162	BS
US	SPERRY	218	20150922	20160513	8	48.6195	-113.757	2582	4079	BW
US	SPERRY	218	20150922	20160920	8	48.6195	-113.757	2582	2350	BA
US	SPERRY	218	20150922	20160513	4	48.6201	-113.759	2549	3170	BW

PU	GLACIER_NAME	WGMS_ID	FROM	TO	POINT_ID	LAT	LON	ELEV	MB	MB_CODE
US	SPERRY	218	20160513	20160920	7	48.6224	-113.755	2479	-2304	BS
US	SPERRY	218	20150922	20160513	7	48.6224	-113.755	2479	2224	BW
US	SPERRY	218	20150922	20160920	7	48.6224	-113.755	2479	-79	BA
US	SPERRY	218	20160513	20160920	5	48.6226	-113.763	2454	-2722	BS
US	SPERRY	218	20150922	20160920	5	48.6226	-113.763	2454	-1093	BA
US	SPERRY	218	20150922	20160513	5	48.6226	-113.763	2454	1629	BW
US	SPERRY	218	20160513	20160920	3	48.6225	-113.759	2454	-2745	BS
US	SPERRY	218	20150922	20160920	3	48.6225	-113.759	2454	-262	BA
US	SPERRY	218	20150922	20160513	3	48.6225	-113.759	2454	2483	BW
US	SPERRY	218	20160513	20160920	1	48.6247	-113.758	2375	-2712	BS
US	SPERRY	218	20150922	20160920	1	48.6247	-113.758	2375	-690	BA
US	SPERRY	218	20150922	20160513	1	48.6247	-113.758	2375	2022	BW
US	SPERRY	218	20160513	20160920	6	48.6261	-113.753	2351	-2724	BS
US	SPERRY	218	20150922	20160920	6	48.6261	-113.753	2351	-411	BA
US	SPERRY	218	20150922	20160513	6	48.6261	-113.753	2351	2313	BW
US	SPERRY	218	20150922	20160920	2	48.6264	-113.755	2317	-822	BA
US	SPERRY	218	20150922	20160513	2	48.6264	-113.755	2317	2300	BW
US	SPERRY	218	20160513	20160920	2	48.6264	-113.755	2317	-3121	BS
US	SPERRY	218	20170509	20170912	8	48.6195	-113.757	2585	-3737	BS
US	SPERRY	218	20160920	20170912	8	48.6195	-113.757	2585	1866	BA
US	SPERRY	218	20160920	20170509	8	48.6195	-113.757	2585	5602	BW
US	SPERRY	218	20170509	20170912	7	48.6224	-113.755	2479	-3962	BS
US	SPERRY	218	20160920	20170912	7	48.6224	-113.755	2479	92	BA
US	SPERRY	218	20160920	20170509	7	48.6224	-113.755	2479	4055	BW
US	SPERRY	218	20170509	20170912	3	48.6225	-113.759	2457	-4346	BS
US	SPERRY	218	20160920	20170912	3	48.6225	-113.759	2457	-699	BA
US	SPERRY	218	20160920	20170509	3	48.6225	-113.759	2457	3647	BW
US	SPERRY	218	20170509	20170912	5	48.6226	-113.763	2454	-4805	BS
US	SPERRY	218	20160920	20170912	5	48.6226	-113.763	2454	-2045	BA
US	SPERRY	218	20160920	20170509	5	48.6226	-113.763	2454	2760	BW
US	SPERRY	218	20160920	20170509	1	48.6247	-113.758	2381	2959	BW
US	SPERRY	218	20160920	20170912	1	48.6247	-113.758	2381	-1731	BA
US	SPERRY	218	20170509	20170912	1	48.6247	-113.758	2381	-4690	BS
US	SPERRY	218	20170509	20170912	6	48.6261	-113.753	2351	-4297	BS
US	SPERRY	218	20160920	20170912	6	48.6261	-113.753	2351	-1145	BA
US	SPERRY	218	20160920	20170509	6	48.6261	-113.753	2351	3153	BW
US	SPERRY	218	20170509	20170912	2	48.6264	-113.755	2317	-4416	BS
US	SPERRY	218	20160920	20170509	2	48.6264	-113.755	2317	3516	BW
US	SPERRY	218	20160920	20170912	2	48.6264	-113.755	2317	-900	BA
US	WOLVERINE	94	20150901	20160512	C	60.41974	-148.92072	1294	4540	BW
US	WOLVERINE	94	20150901	20160908	C	60.41974	-148.92072	1294	1660	BA
US	WOLVERINE	94	20160512	20160908	C	60.41974	-148.92072	1294	-2950	BS
US	WOLVERINE	94	20150901	20160909	B	60.40416	-148.90667	1062	-1170	BA
US	WOLVERINE	94	20160515	20160909	B	60.40416	-148.90667	1062	-3730	BS
US	WOLVERINE	94	20150901	20160515	B	60.40416	-148.90667	1062	2560	BW
US	WOLVERINE	94	20160507	20160911	AU	60.38054	-148.91833	615	-6960	BS
US	WOLVERINE	94	20150902	20160507	AU	60.38054	-148.91833	615	840	BW
US	WOLVERINE	94	20150901	20160911	AU	60.38054	-148.91833	615	-6120	BA
US	WOLVERINE	94	20170427	20170909	C	60.41974	-148.92072	1294	-1500	BS
US	WOLVERINE	94	20160908	20170909	C	60.41974	-148.92072	1294	500	BA
US	WOLVERINE	94	20160908	20170427	C	60.41974	-148.92072	1294	2000	BW
US	WOLVERINE	94	20160909	20170426	B	60.40416	-148.90667	1060	1320	BW
US	WOLVERINE	94	20170426	20170908	B	60.40416	-148.90667	1060	-3010	BS
US	WOLVERINE	94	20160909	20170908	B	60.40416	-148.90667	1060	-1690	BA
US	WOLVERINE	94	20160911	20170910	AU	60.38054	-148.91833	613	-5860	BA
US	WOLVERINE	94	20170429	20170910	AU	60.38054	-148.91833	613	-5880	BS
US	WOLVERINE	94	20160911	20170429	AU	60.38054	-148.91833	613	20	BW

APPENDIX - Table 6

CHANGES IN AREA, VOLUME AND THICKNESS
FROM GEODETIC SURVEYS (from glaciers with mass-balance observations in 2016 and 2017)

PU	Political unit, alphabetic 2-digit country code (cf. www.iso.org)
GLACIER NAME	Name of the glacier in capital letters, cf. Appendix Table 1
WGMS ID	Key identifier of the glacier, cf. Appendix Table 1
FROM	Date of the first geodetic survey, in the format YYYYMMDD*
TO	Date of the second geodetic survey, in the format YYYYMMDD*
AREA	Glacier area (in km^2) at the data of the second geodetic survey
AREA CHG	Change in area between the surveys in 1,000 square metres
THICKNESS CHG	Change in thickness between the surveys in millimetres
VOLUME CHG	Change in volume between the surveys in 1,000 cubic metres
INVESTIGATORS (SPONS_AGENCY)	Names of the investigators and their sponsoring agencies (cf. Section 9)
REFERENCES	Literature related to reported geodetic surveys

*Unknown month or day are each replaced by „99"

PU	GLACIER_NAME	WGMS_ID	FROM	TO	AREA	AREA_CHG	THICKNESS_CHG	VOLUME_CHG	INVESTIGATORS_(SPONS_AGENCY)	REFERENCES
AQ - Antarctica										
AQ	BAHIA DEL DIABLO	2665	20010399	20110399	12.9		-2550		S. Marinsek, E. Ermolin	Marinsek, S., and E. Ermolin, 2015, Ann. Glaciol., 56, 141-146, 10.3189/2015AoG70A958
AQ	HURD	3367	19561215	20001215	4.73	-510	-3600	-65000		Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Molina, C., et al., 2007, Ann. Glaciol., 46, 43-49, 10.3189/172756407782871765
AQ	JOHNSONS	3366	19569999	20009999	5.61	-10	-7500	-43000		Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Molina, C., et al., 2007, Ann. Glaciol., 46, 43-49, 10.3189/172756407782871765
AR - Argentina										
AR	AGUA NEGRA	4532	20000220	20130404	1.21	-150	-4586	-5577	Pierre Pitte, Hernán Gargantini	
AR	AGUA NEGRA	4532	20000216	20120219	1.079		-6538	-7055	Thorsten Seehaus	Braun et al. 2019; Nature Climate Change 9, 130-136, DOI:10.1038/s41558-018-0375-6495
AR	BROWN SUPERIOR	3903	20000216	20120219	0.212		-5203	-1103	Thorsten Seehaus	Braun et al. 2019; Nature Climate Change 9, 130-136, DOI:10.1038/s41558-018-0375-6518
AR	BROWN SUPERIOR	3903	20140424	20150503	0.175	-7	-2652	-331	Gabriel Cabrera	WGMS (2017): GGCB No. 2 (2014-2015).
AR	CONCONTA NORTE	3902	20000216	20120219	0.115		-2845	-327	Thorsten Seehaus	Braun et al. 2019; Nature Climate Change 9, 130-136, DOI:10.1038/s41558-018-0375-6519
AR	CONCONTA NORTE	3902	20140423	20150506	0.07	-8	-3211	-239	Gabriel Cabrera	WGMS (2017): GGCB No. 2 (2014-2015).
AR	DE LOS TRES	1675	19630301	19980315	0.976	-60	-2340			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Popovnin, V.V., et al., 2006, Mater. Glyatsol. Issled., 100, 141-151
AR	LOS AMARILLOS	3904	20140305	20150399	0.78	-72	-1219	-994	Gabriel Cabrera	WGMS (2017): GGCB No. 2 (2014-2015).
AR	MARTIAL ESTE	2000	19840315	19980315	0.093	-10	-7000			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Strelin, J., and R. Iturraspe, 2007, Global Planet. Change, 59, 17-26, 10.1016/j.gloplacha.2006.11.019
AT - Austria										
AT	HINTEREIS F.	491	18949999	19200701	11.29	-260	-9880			Finsterwalder, Rü., and H. Rentsch, 1980, Z. Gletsch.kd. Glazialgeol., 16, 111-115; Finsterwalder, Rü., and H. Rentsch, 1992, Z. Gletsch.kd. Glazialgeol., 27/28, 165-172
AT	HINTEREIS F.	491	19200701	19400701	10.47	-820	-12600			Finsterwalder, Rü., and H. Rentsch, 1980, Z. Gletsch.kd. Glazialgeol., 16, 111-115; Finsterwalder, Rü., and H. Rentsch, 1992, Z. Gletsch.kd. Glazialgeol., 27/28, 165-172
AT	HINTEREIS F.	491	19400701	19530701	10.24	-230	-11050			Finsterwalder, Rü., and H. Rentsch, 1980, Z. Gletsch.kd. Glazialgeol., 16, 111-115; Finsterwalder, Rü., and H. Rentsch, 1980, Z. Gletsch.kd. Glazialgeol., 16, 111-115
AT	HINTEREIS F.	491	19539999	19599999			-2880			Finsterwalder, Rü., and H. Rentsch, 1980, Z. Gletsch.kd. Glazialgeol., 16, 111-115
AT	HINTEREIS F.	491	19530904	19640920			-8824			Fischer, A., 2011, Cryosphere, 5, 107-124, 10.5194/tc-5-107-2011
AT	HINTEREIS F.	491	19640920	19670901			1529			Fischer, A., 2011, Cryosphere, 5, 107-124, 10.5194/tc-5-107-2011
AT	HINTEREIS F.	491	19670901	19690901			-4588			Fischer, A., 2011, Cryosphere, 5, 107-124, 10.5194/tc-5-107-2011
AT	HINTEREIS F.	491	19599999	19699999	9.7		-1500			Finsterwalder, Rü., and H. Rentsch, 1980, Z. Gletsch.kd. Glazialgeol., 16, 111-115
AT	HINTEREIS F.	491	19690901	19790830			3176			Fischer, A., 2011, Cryosphere, 5, 107-124, 10.5194/tc-5-107-2011
AT	HINTEREIS F.	491	19699999	19799999	9.08	100	-1363	-13181		PSFG (1985): FoG 1975-1980 (Vol. IV).
AT	HINTEREIS F.	491	19790830	19919999			-15412			Fischer, A., 2011, Cryosphere, 5, 107-124, 10.5194/tc-5-107-2011
AT	HINTEREIS F.	491	19799999	19919999	8.884	-991	-9275	-85486		WGMS (1998): FoG 1990-1995 (Vol. VII).
AT	HINTEREIS F.	491	19910901	19970901	8.53	-167	-3509	-30234	L.N. Braun	WGMS (2005): FoG 1995-2000 (Vol. VIII).
AT	HINTEREIS F.	491	19919999	19970912			-5176			Fischer, A., 2011, Cryosphere, 5, 107-124, 10.5194/tc-5-107-2011
AT	HINTEREIS F.	491	20011011	20020918	7.861	-161	-845	-6779	Christoph Klug, Stephan Galos, Lorenzo Rieg	Klug et al. (2018); The Cryosphere, 12, 833-849 p.
AT	HINTEREIS F.	491	20020918	20030926	7.664	-197	-3545	-27866	Christoph Klug, Stephan Galos, Lorenzo Rieg	Klug et al. (2018); The Cryosphere, 12, 833-849 p.
AT	HINTEREIS F.	491	20030926	20041005	7.606	-59	-783	-6001	Christoph Klug, Stephan Galos, Lorenzo Rieg	Klug et al. (2018); The Cryosphere, 12, 833-849 p.
AT	HINTEREIS F.	491	20041005	20051012	7.51	-95	-1172	-8913	Christoph Klug, Stephan Galos, Lorenzo Rieg	Klug et al. (2018); The Cryosphere, 12, 833-849 p.
AT	HINTEREIS F.	491	19970912	20060909			-11882			Fischer, A., 2011, Cryosphere, 5, 107-124, 10.5194/tc-5-107-2011
AT	HINTEREIS F.	491	20051012	20061008	7.383	-127	-2437	-18301	Christoph Klug, Stephan Galos, Lorenzo Rieg	Klug et al. (2018); The Cryosphere, 12, 833-849 p.
AT	HINTEREIS F.	491	20061008	20071011	7.276	-107	-1544	-11398	Christoph Klug, Stephan Galos, Lorenzo Rieg	Klug et al. (2018); The Cryosphere, 12, 833-849 p.
AT	HINTEREIS F.	491	20071011	20080909	7.148	-128	-1414	-10285	Christoph Klug, Stephan Galos, Lorenzo Rieg	Klug et al. (2018); The Cryosphere, 12, 833-849 p.
AT	HINTEREIS F.	491	20080909	20090930	7.048	-100	-1269	-9069	Christoph Klug, Stephan Galos, Lorenzo Rieg	Klug et al. (2018); The Cryosphere, 12, 833-849 p.
AT	HINTEREIS F.	491	20090930	20101008	6.879	-169	-836	-5892	Christoph Klug, Stephan Galos, Lorenzo Rieg	Klug et al. (2018); The Cryosphere, 12, 833-849 p.
AT	HINTEREIS F.	491	20101008	20111004	6.782	-97	-1454	-10001	Christoph Klug, Stephan Galos, Lorenzo Rieg	Klug et al. (2018); The Cryosphere, 12, 833-849 p.
AT	HINTEREIS F.	491	20011011	20111004	6.782	-1240	-14507	-116377	Christoph Klug, Stephan Galos, Lorenzo Rieg	Klug et al. (2018); The Cryosphere, 12, 833-849 p.
AT	JAMTAL F.	480	19960901	20020919			-2353			Fischer, A., 2011, Cryosphere, 5, 107-124, 10.5194/tc-5-107-2011
AT	JAMTAL F.	480	20020919	20061001			-5882			Fischer, A., 2011, Cryosphere, 5, 107-124, 10.5194/tc-5-107-2011
AT	KESSELWAND F.	507	19690901	19710818			706			Fischer, A., 2011, Cryosphere, 5, 107-124, 10.5194/tc-5-107-2011

PU	GLACIER_NAME	WGMS_ID	FROM	TO	AREA	AREA_CHG	THICKNESS_CHG	VOLUME_CHG	INVESTIGATORS_(SPONS_AGENCY)	REFERENCES
AT	KESSELWAND F.	507	19710818	19970912			-4118			Fischer, A., 2011, Cryosphere, 5, 107-124, 10.5194/tc-5-107-2011
AT	KESSELWAND F.	507	19970912	20060909			-5882			Fischer, A., 2011, Cryosphere, 5, 107-124, 10.5194/tc-5-107-2011
AT	PASTERZE	566	19640701	19810701	18.9	-650	-7200			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Tintor, W., and H. Wakonigg, 1998, Z. Gletsch.kd. Glazialgeol., 34, 161-166
AT	STUBACHER SONNBLICK K.	573	19690901	19980808			-4118			Fischer, A., 2011, Cryosphere, 5, 107-124, 10.5194/tc-5-107-2011
AT	VERNAGT F.	489	18899999	19129999	11.509	-40	-4209	-49140		Mayer, C., et al., 2012, Z. Gletsch.kd. Glazial-geol., 45/46, 259-280
AT	VERNAGT F.	489	18899999	19129999	11.548	-30	-4900	-56934		Brunner, K., and H. Rentsch, 1972, Z. Gletsch.kd. Glazialgeol., 8, 11-25
AT	VERNAGT F.	489	19129999	19389999	10.41	-1098	-9204	-113950		Mayer, C., et al., 2012, Z. Gletsch.kd. Glazial-geol., 45/46, 259-280
AT	VERNAGT F.	489	19129999	19389999	10.48		-7600	-83492		Brunner, K., and H. Rentsch, 1972, Z. Gletsch.kd. Glazialgeol., 8, 11-25
AT	VERNAGT F.	489	19389999	19549999	9.474	-937	-6864	-72690		Mayer, C., et al., 2012, Z. Gletsch.kd. Glazial-geol., 45/46, 259-280
AT	VERNAGT F.	489	19389999	19699999	6.75		-8678	-63136		Brunner, K., and H. Rentsch, 1972, Z. Gletsch.kd. Glazialgeol., 8, 11-25
AT	VERNAGT F.	489	19389999	19699999	9.563		-9300	-92934		Brunner, K., and H. Rentsch, 1972, Z. Gletsch.kd. Glazialgeol., 8, 11-25
AT	VERNAGT F.	489	19549999	19699999	9.466	-8	1545	9510		Mayer, C., et al., 2012, Z. Gletsch.kd. Glazial-geol., 45/46, 259-280
AT	VERNAGT F.	489	19699999	19799999	9.55	116	3043	29057		PSFG (1985): FoG 1975-1980 (Vol. IV).
AT	VERNAGT F.	489	19699999	19799999	9.397	-69	1290	18390		Mayer, C., et al., 2012, Z. Gletsch.kd. Glazial-geol., 45/46, 259-280
AT	VERNAGT F.	489	19799999	19829999	9.35		-900	-9020		Reinhardt, W., and H. Rentsch, 1986, Ann. Glaciol., 8, 151-155
AT	VERNAGT F.	489	19799999	19909999	8.982	-415	-5753	-54240		Mayer, C., et al., 2012, Z. Gletsch.kd. Glazial-geol., 45/46, 259-280
AT	VERNAGT F.	489	19820701	19900824	9.205	-318	-4613	-43199		WGMS (1993): FoG 1985-1990 (Vol. VI).
AT	VERNAGT F.	489	19690901	19970912			-3059			Fischer, A., 2011, Cryosphere, 5, 107-124, 10.5194/tc-5-107-2011
AT	VERNAGT F.	489	19900824	19990701	8.71	-385	-7217	-65611	L.N. Braun	Finsterwalder, Rü., and H. Rentsch, 1992, Z. Gletsch.kd. Glazialgeol., 27/28, 165-172
AT	VERNAGT F.	489	19909999	19999999	8.68	-302	-7884	-70990		Mayer, C., et al., 2012, Z. Gletsch.kd. Glazial-geol., 45/46, 259-280
AT	VERNAGT F.	489	19999999	20039999	8.43	-250	-1520	-13420		Mayer, C., et al., 2012, Z. Gletsch.kd. Glazial-geol., 45/46, 259-280
AT	VERNAGT F.	489	20039999	20069999	8.173	-257	-3192	-26910		Mayer, C., et al., 2012, Z. Gletsch.kd. Glazial-geol., 45/46, 259-280
AT	VERNAGT F.	489	19970912	20060909			-12824			Fischer, A., 2011, Cryosphere, 5, 107-124, 10.5194/tc-5-107-2011
AT	VERNAGT F.	489	20069999	20099999	7.748	-425	-3102	-25210		Mayer, C., et al., 2012, Z. Gletsch.kd. Glazial-geol., 45/46, 259-280
AT	WURTEN K.	545	18719999	19300701	3.01	-480	-13340			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Auer, I., et al., 1995, Oester. Beitr. Meteor. Geophys., 12, 143p
AT	WURTEN K.	545	19300701	19670701	2.33	-680	-42490			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Auer, I., et al., 1995, Oester. Beitr. Meteor. Geophys., 12, 143p
AT	WURTEN K.	545	19670701	19790701	2.05	-280	-6660			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Auer, I., et al., 1995, Oester. Beitr. Meteor. Geophys., 12, 143p
AT	WURTEN K.	545	19790701	19910701	1.32	-730	-15850			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Auer, I., et al., 1995, Oester. Beitr. Meteor. Geophys., 12, 143p
BO - Bolivia										
BO	ZONGO	1503	19560520	19630621			1000		Antoine Rabatel, Alvaro Soruco	Rabatel, A., and {27 others}, 2013, Cry-osphere, 7, 81-102, 10.5194/tc-7-81-2013
BO	ZONGO	1503	19630621	19750723			4289		Antoine Rabatel, Alvaro Soruco	Rabatel, A., and {27 others}, 2013, Cry-osphere, 7, 81-102, 10.5194/tc-7-81-2013
BO	ZONGO	1503	19750723	19830620			-3833		Antoine Rabatel, Alvaro Soruco	Rabatel, A., and {27 others}, 2013, Cry-osphere, 7, 81-102, 10.5194/tc-7-81-2013
BO	ZONGO	1503	19830620	19970420			-9789		Antoine Rabatel, Alvaro Soruco	Rabatel, A., and {27 others}, 2013, Cry-osphere, 7, 81-102, 10.5194/tc-7-81-2013
BO	ZONGO	1503	19970420	20060713			-18133		Antoine Rabatel, Alvaro Soruco	Rabatel, A., and {27 others}, 2013, Cry-osphere, 7, 81-102, 10.5194/tc-7-81-2013
CA - Canada										
CA	HELM	45	19280701	19880101	1.28	-3000	-58000			Cogley 2018, GMBAL.TTN201801, based on: Koch et al. (2009): Global and Planetary Change, 66(3-4), 161-178.
CA	HELM	45	19880101	20000216	1.28	0	-11000			Cogley 2018, GMBAL.TTN201801, based on: Koch et al. (2009): Global and Planetary Change, 66(3-4), 161-178.
CA	PLACE	41	19659999	20059999			37600			Menounos, , and Schiefer, 2008, Geodetic constraints on the glacier mass balance record of Place Glacier, British Columbia, Canada. (conference abstract)
CA	WHITE	0	19600802	20140710	38.54	-2530	-11060			Cogley 2018, GMBAL.TTN201801, based on: Thomson et al. (2017): Journal of Glaciology, 63 (237), 55-66. doi: 10.1017/jog.2016.112.
CA	WHITE	0	19600802	20140710	38.542		-10743		Laura Thomson	Thomson and Copland, (2016), Journal of Maps. doi: 10.1080:17445647.2015.1124057
CH - Switzerland										
CH	ADLER	3801	20051028	20091004	2.263	-27	-1015	-2311	Philip Joerg	Joerg, P.C., et al., 2012, Remote Sens. Environ., 127, 118-129

PU	GLACIER_NAME	WGMS_ID	FROM	TO	AREA	AREA_CHG	THICKNESS_CHG	VOLUME_CHG	INVESTIGATORS_(SPONS_AGENCY)	REFERENCES
CH	ADLER	3801	20091004	20100929	2.244	-8	-772	-1735	Philip Joerg	Joerg, P.C., et al., 2012, Remote Sens. Environ., 127, 118-129
CH	ALLALIN	394	19320701	19460701	10.3	-320	-2100			PSFG (1967): FoG 1959-1965 (Vol. I).
CH	ALLALIN	394	19460701	19560701	9.91	-390	-3000			PSFG (1967): FoG 1959-1965 (Vol. I).
CH	ALLALIN	394	19329999	19560915	9.939	-1133		-43443	Andreas Bauder	GLAMOS (2016): The Swiss Glaciers 2011/12 and 2012/13, Bauder, A. (ed.), Glaciological Report No. 133/134, EKK of SCNAT, doi: 10.18752/glrep_133-134.
CH	ALLALIN	394	19320815	19560915	9.91	-710	-1270			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Bauder, A., et al., 2007, Ann. Glaciol., 46, 145-149, 10.3189/172756407782871701
CH	ALLALIN	394	19560915	19670821	9.955	16		17803	Andreas Bauder	GLAMOS (2016): The Swiss Glaciers 2011/12 and 2012/13, Bauder, A. (ed.), Glaciological Report No. 133/134, EKK of SCNAT, doi: 10.18752/glrep_133-134.
CH	ALLALIN	394	19560701	19670701	9.948	10	1800			PSFG (1973): FoG 1965-1970 (Vol. II).
CH	ALLALIN	394	19560915	19670715	9.948	10	-1170			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Bauder, A., et al., 2007, Ann. Glaciol., 46, 145-149, 10.3189/172756407782871701
CH	ALLALIN	394	19670715	19820815	9.839	-110	4410			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Bauder, A., et al., 2007, Ann. Glaciol., 46, 145-149, 10.3189/172756407782871701
CH	ALLALIN	394	19670821	19820917	10.459	504		49124	Andreas Bauder	GLAMOS (2016): The Swiss Glaciers 2011/12 and 2012/13, Bauder, A. (ed.), Glaciological Report No. 133/134, EKK of SCNAT, doi: 10.18752/glrep_133-134.
CH	ALLALIN	394	19820815	19910815	9.774	-70	-7310			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Bauder, A., et al., 2007, Ann. Glaciol., 46, 145-149, 10.3189/172756407782871701
CH	ALLALIN	394	19820917	19910910	9.799	-660		-87021	Andreas Bauder	GLAMOS (2016): The Swiss Glaciers 2011/12 and 2012/13, Bauder, A. (ed.), Glaciological Report No. 133/134, EKK of SCNAT, doi: 10.18752/glrep_133-134.
CH	ALLALIN	394	19910910	19990902	9.774	-25		-25779	Andreas Bauder	GLAMOS (2016): The Swiss Glaciers 2011/12 and 2012/13, Bauder, A. (ed.), Glaciological Report No. 133/134, EKK of SCNAT, doi: 10.18752/glrep_133-134.
CH	ALLALIN	394	19910815	19990815	9.716	-60	-2230			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Bauder, A., et al., 2007, Ann. Glaciol., 46, 145-149, 10.3189/172756407782871701
CH	ALLALIN	394	19329999	20049999	9.68			-108000		Bauder, A., et al., 2007, Ann. Glaciol., 46, 145-149, 10.3189/172756407782871701
CH	ALLALIN	394	19990815	20040915	9.68	-40	-1090			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Bauder, A., et al., 2007, Ann. Glaciol., 46, 145-149, 10.3189/172756407782871701
CH	ALLALIN	394	19990902	20040907	9.68	-94		-14222	Andreas Bauder	GLAMOS (2016): The Swiss Glaciers 2011/12 and 2012/13, Bauder, A. (ed.), Glaciological Report No. 133/134, EKK of SCNAT, doi: 10.18752/glrep_133-134.
CH	ALLALIN	394	20040907	20080829	9.462	-218		-24215	Andreas Bauder	GLAMOS (2016): The Swiss Glaciers 2011/12 and 2012/13, Bauder, A. (ed.), Glaciological Report No. 133/134, EKK of SCNAT, doi: 10.18752/glrep_133-134.
CH	ALLALIN	394	19889999	20099999	9.131	-1000	-11770	-112518	M. Fischer	Fischer, Huss, and Hoelzle (2015): The Cryosphere, 9, 525-540, https://doi.org/10.5194/tc-9-525-2015.
CH	ALLALIN	394	20080829	20120920	9.699	237		-36109	Andreas Bauder	GLAMOS (2016): The Swiss Glaciers 2011/12 and 2012/13, Bauder, A. (ed.), Glaciological Report No. 133/134, EKK of SCNAT, doi: 10.18752/glrep_133-134.
CH	BASODINO	463	19299999	19499999	2.706	-574		-43969	Andreas Bauder	GLAMOS (2016): The Swiss Glaciers 2011/12 and 2012/13, Bauder, A. (ed.), Glaciological Report No. 133/134, EKK of SCNAT, doi: 10.18752/glrep_133-134.
CH	BASODINO	463	19290915	19490915	2.201	0	-12090			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Bauder, A., et al., 2007, Ann. Glaciol., 46, 145-149, 10.3189/172756407782871701
CH	BASODINO	463	19499999	19619999	2.436	-270		-8476	Andreas Bauder	GLAMOS (2016): The Swiss Glaciers 2011/12 and 2012/13, Bauder, A. (ed.), Glaciological Report No. 133/134, EKK of SCNAT, doi: 10.18752/glrep_133-134.
CH	BASODINO	463	19490915	19610915	2.201	0	-2800			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Bauder, A., et al., 2007, Ann. Glaciol., 46, 145-149, 10.3189/172756407782871701
CH	BASODINO	463	19610915	19711015	2.201	0	4160			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Bauder, A., et al., 2007, Ann. Glaciol., 46, 145-149, 10.3189/172756407782871701
CH	BASODINO	463	19619999	19710903	2.388	-48		11179	Andreas Bauder	GLAMOS (2016): The Swiss Glaciers 2011/12 and 2012/13, Bauder, A. (ed.), Glaciological Report No. 133/134, EKK of SCNAT, doi: 10.18752/glrep_133-134.
CH	BASODINO	463	19711015	19851015	2.201	0	2870			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Bauder, A., et al., 2007, Ann. Glaciol., 46, 145-149, 10.3189/172756407782871701
CH	BASODINO	463	19710903	19850917	2.587	199		7863	Andreas Bauder	GLAMOS (2016): The Swiss Glaciers 2011/12 and 2012/13, Bauder, A. (ed.), Glaciological Report No. 133/134, EKK of SCNAT, doi: 10.18752/glrep_133-134.

PU	GLACIER_NAME	WGMS_ID	FROM	TO	AREA	AREA_CHG	THICKNESS_CHG	VOLUME_CHG	INVESTIGATORS_(SPONS_AGENCY)	REFERENCES
CH	BASODINO	463	19850917	19910918	2.398	-189		-15530	Andreas Bauder	GLAMOS (2016): The Swiss Glaciers 2011/12 and 2012/13, Bauder, A. (ed.), Glaciological Report No. 133/134, EKK of SCNAT, doi: 10.18752/glrep_133-134.
CH	BASODINO	463	19851015	19911015	2.201	0	-5380			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Bauder, A., et al., 2007, Ann. Glaciol., 46, 145-149, 10.3189/172756407782871701
CH	BASODINO	463	19910918	20020916	2.201	-197		-12023	Andreas Bauder	GLAMOS (2016): The Swiss Glaciers 2011/12 and 2012/13, Bauder, A. (ed.), Glaciological Report No. 133/134, EKK of SCNAT, doi: 10.18752/glrep_133-134.
CH	BASODINO	463	19299999	20029999	2.201			-61000		Bauder, A., et al., 2007, Ann. Glaciol., 46, 145-149, 10.3189/172756407782871701
CH	BASODINO	463	19911015	20021015	2.201	0	-4450			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Bauder, A., et al., 2007, Ann. Glaciol., 46, 145-149, 10.3189/172756407782871701
CH	BASODINO	463	20020916	20080829	1.963	-238		-21103	Andreas Bauder	GLAMOS (2016): The Swiss Glaciers 2011/12 and 2012/13, Bauder, A. (ed.), Glaciological Report No. 133/134, EKK of SCNAT, doi: 10.18752/glrep_133-134.
CH	BASODINO	463	19879999	20099999	1.889	0	-19850	-41772	M. Fischer	Fischer, Huss, and Hoelzle (2015): The Cryosphere, 9, 525-540, https://doi.org/10.5194/tc-9-525-2015.
CH	BASODINO	463	20080829	20130821	1.844	-119		-4915	Andreas Bauder	GLAMOS (2016): The Swiss Glaciers 2011/12 and 2012/13, Bauder, A. (ed.), Glaciological Report No. 133/134, EKK of SCNAT, doi: 10.18752/glrep_133-134.
CH	CLARIDENFIRN	2660	19369999	19560924	5.809	-355		-4117	Andreas Bauder	GLAMOS (2016): The Swiss Glaciers 2011/12 and 2012/13, Bauder, A. (ed.), Glaciological Report No. 133/134, EKK of SCNAT, doi: 10.18752/glrep_133-134.
CH	CLARIDENFIRN	2660	19560924	19790917	6.012	203		22843	Andreas Bauder	GLAMOS (2016): The Swiss Glaciers 2011/12 and 2012/13, Bauder, A. (ed.), Glaciological Report No. 133/134, EKK of SCNAT, doi: 10.18752/glrep_133-134.
CH	CLARIDENFIRN	2660	19790917	19850911	6.085	73		438	Andreas Bauder	GLAMOS (2016): The Swiss Glaciers 2011/12 and 2012/13, Bauder, A. (ed.), Glaciological Report No. 133/134, EKK of SCNAT, doi: 10.18752/glrep_133-134.
CH	CLARIDENFIRN	2660	19360815	19851015	5.127	0	2290			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Bauder, A., et al., 2007, Ann. Glaciol., 46, 145-149, 10.3189/172756407782871701
CH	CLARIDENFIRN	2660	19851015	19901015	5.127	0	-4530			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Bauder, A., et al., 2007, Ann. Glaciol., 46, 145-149, 10.3189/172756407782871701
CH	CLARIDENFIRN	2660	19850911	19900928	5.64	-445		-30367	Andreas Bauder	GLAMOS (2016): The Swiss Glaciers 2011/12 and 2012/13, Bauder, A. (ed.), Glaciological Report No. 133/134, EKK of SCNAT, doi: 10.18752/glrep_133-134.
CH	CLARIDENFIRN	2660	19900928	20030808	5.127	-513		-29011	Andreas Bauder	GLAMOS (2016): The Swiss Glaciers 2011/12 and 2012/13, Bauder, A. (ed.), Glaciological Report No. 133/134, EKK of SCNAT, doi: 10.18752/glrep_133-134.
CH	CLARIDENFIRN	2660	19369999	20039999	5.127			-40000		Bauder, A., et al., 2007, Ann. Glaciol., 46, 145-149, 10.3189/172756407782871701
CH	CLARIDENFIRN	2660	19901015	20030815	5.127	0	-4590			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Bauder, A., et al., 2007, Ann. Glaciol., 46, 145-149, 10.3189/172756407782871701
CH	CORBASSIERE	366	18779999	19350815	15.996	0	-8170			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Bauder, A., et al., 2007, Ann. Glaciol., 46, 145-149, 10.3189/172756407782871701
CH	CORBASSIERE	366	19349999	19830907	19.499	111		-86011	Andreas Bauder	GLAMOS (2016): The Swiss Glaciers 2011/12 and 2012/13, Bauder, A. (ed.), Glaciological Report No. 133/134, EKK of SCNAT, doi: 10.18752/glrep_133-134.
CH	CORBASSIERE	366	19350815	19980915	15.996	0	-10120			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Bauder, A., et al., 2007, Ann. Glaciol., 46, 145-149, 10.3189/172756407782871701
CH	CORBASSIERE	366	19830907	19980831	18.559	-940		-127719	Andreas Bauder	GLAMOS (2016): The Swiss Glaciers 2011/12 and 2012/13, Bauder, A. (ed.), Glaciological Report No. 133/134, EKK of SCNAT, doi: 10.18752/glrep_133-134.
CH	CORBASSIERE	366	19980831	20030802	18.515	-44		-24954	Andreas Bauder	GLAMOS (2016): The Swiss Glaciers 2011/12 and 2012/13, Bauder, A. (ed.), Glaciological Report No. 133/134, EKK of SCNAT, doi: 10.18752/glrep_133-134.
CH	CORBASSIERE	366	18779999	20039999	15.996			-421000		Bauder, A., et al., 2007, Ann. Glaciol., 46, 145-149, 10.3189/172756407782871701
CH	CORBASSIERE	366	19980915	20030815	15.996	0	-1450			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Bauder, A., et al., 2007, Ann. Glaciol., 46, 145-149, 10.3189/172756407782871701
CH	CORBASSIERE	366	20030802	20080829	18.202	-313		-93029	Andreas Bauder	GLAMOS (2016): The Swiss Glaciers 2011/12 and 2012/13, Bauder, A. (ed.), Glaciological Report No. 133/134, EKK of SCNAT, doi: 10.18752/glrep_133-134.
CH	CORBASSIERE	366	19839999	20109999	15.051	-1000	-18870	-294744	M. Fischer	Fischer, Huss, and Hoelzle (2015): The Cryosphere, 9, 525-540, https://doi.org/10.5194/tc-9-525-2015.
CH	CORBASSIERE	366	20080829	20130821	17.518	-684		-78336	Andreas Bauder	GLAMOS (2016): The Swiss Glaciers 2011/12 and 2012/13, Bauder, A. (ed.), Glaciological Report No. 133/134, EKK of SCNAT, doi: 10.18752/glrep_133-134.

PU	GLACIER_NAME	WGMS_ID	FROM	TO	AREA	AREA_CHG	THICKNESS_CHG	VOLUME_CHG	INVESTIGATORS_(SPONS_AGENCY)	REFERENCES
CH	FINDELEN	389	18599999	18819999	18.44	-1030	-12500		P. Rastner, P.C. Joerg, M. Huss, M. Zemp	Rastner et al. (2016), GPC, 145, p. 67-77. http://dx.doi.org/10.1016/j.glopla-cha.2016.07.005
CH	FINDELEN	389	18819999	18909999	18.41	-30	-1840		P. Rastner, P.C. Joerg, M. Huss, M. Zemp	Rastner et al. (2016), GPC, 145, p. 67-77. http://dx.doi.org/10.1016/j.glopla-cha.2016.07.005
CH	FINDELEN	389	18909999	19099999	18.21	-200	1830		P. Rastner, P.C. Joerg, M. Huss, M. Zemp	Rastner et al. (2016), GPC, 145, p. 67-77. http://dx.doi.org/10.1016/j.glopla-cha.2016.07.005
CH	FINDELEN	389	19099999	19379999	18.22	10	-18730		P. Rastner, P.C. Joerg, M. Huss, M. Zemp	Rastner et al. (2016), GPC, 145, p. 67-77. http://dx.doi.org/10.1016/j.glopla-cha.2016.07.005
CH	FINDELEN	389	19379999	19669999	17.15	-1070	-11290		P. Rastner, P.C. Joerg, M. Huss, M. Zemp	Rastner et al. (2016), GPC, 145, p. 67-77. http://dx.doi.org/10.1016/j.glopla-cha.2016.07.005
CH	FINDELEN	389	19669999	19779999	16.81	-340	-120		P. Rastner, P.C. Joerg, M. Huss, M. Zemp	Rastner et al. (2016), GPC, 145, p. 67-77. http://dx.doi.org/10.1016/j.glopla-cha.2016.07.005
CH	FINDELEN	389	19319999	19820915	18.959	-1772		-210516	Andreas Bauder	Bauder, A. (Ed.), The Swiss Glaciers 2011/2012 and 2012/2013, Glac. Rep. No. 133/134, EKK of SCNAT, 2016
CH	FINDELEN	389	19779999	19889999	16.87	60	-740		P. Rastner, P.C. Joerg, M. Huss, M. Zemp	Rastner et al. (2016), GPC, 145, p. 67-77. http://dx.doi.org/10.1016/j.glopla-cha.2016.07.005
CH	FINDELEN	389	19889999	19959999	16.43	-440	350		P. Rastner, P.C. Joerg, M. Huss, M. Zemp	Rastner et al. (2016), GPC, 145, p. 67-77. http://dx.doi.org/10.1016/j.glopla-cha.2016.07.005
CH	FINDELEN	389	19959999	20009999	15.89	-540	-4630		P. Rastner, P.C. Joerg, M. Huss, M. Zemp	Rastner et al. (2016), GPC, 145, p. 67-77. http://dx.doi.org/10.1016/j.glopla-cha.2016.07.005
CH	FINDELEN	389	20009999	20059999	15.34	-550	-5930		P. Rastner, P.C. Joerg, M. Huss, M. Zemp	Rastner et al. (2016), GPC, 145, p. 67-77. http://dx.doi.org/10.1016/j.glopla-cha.2016.07.005
CH	FINDELEN	389	19820915	20070913	16.952	-2007		-306361	Andreas Bauder	GLAMOS (2016): The Swiss Glaciers 2011/12 and 2012/13, Bauder, A. (ed.), Glaciological Report No. 133/134, EKK of SCNAT, doi: 10.18752/glrep_133-134.
CH	FINDELEN	389	20051028	20091004	13.308	-231	-2368	-31792	Philip Joerg	Joerg, P.C., Morsdorf, F. and Zemp, M. (2012), Remote Sensing of Environment, 127: p. 118-129.
CH	FINDELEN	389	19829999	20099999	16.231	-2000	-15740	-274307	M. Fischer	Fischer, Huss, and Hoelzle (2015): The Cryosphere, 9, 525-540, https://doi. org/10.5194/tc-9-525-2015.
CH	FINDELEN	389	20091004	20100929	13.082	-59	-959	-12574	Philip Joerg	Joerg, P.C., Morsdorf, F. and Zemp, M. (2012), Remote Sensing of Environment, 127: p. 118-129.
CH	GIETRO	367	19349999	19710810	5.652	-323		431	Andreas Bauder	GLAMOS (2016): The Swiss Glaciers 2011/12 and 2012/13, Bauder, A. (ed.), Glaciological Report No. 133/134, EKK of SCNAT, doi: 10.18752/glrep_133-134.
CH	GIETRO	367	19340915	19710915	5.549	0	40			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Bauder, A., et al., 2007, Ann. Glaciol., 46, 145-149, 10.3189/172756407782871701
CH	GIETRO	367	19710810	19850927	5.685	33		-26121	Andreas Bauder	GLAMOS (2016): The Swiss Glaciers 2011/12 and 2012/13, Bauder, A. (ed.), Glaciological Report No. 133/134, EKK of SCNAT, doi: 10.18752/glrep_133-134.
CH	GIETRO	367	19710915	19851015	5.549	0	-4200			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Bauder, A., et al., 2007, Ann. Glaciol., 46, 145-149, 10.3189/172756407782871701
CH	GIETRO	367	19851015	19971015	5.549	0	-3200			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Bauder, A., et al., 2007, Ann. Glaciol., 46, 145-149, 10.3189/172756407782871701
CH	GIETRO	367	19850927	19970915	5.705	20		-21610	Andreas Bauder	GLAMOS (2016): The Swiss Glaciers 2011/12 and 2012/13, Bauder, A. (ed.), Glaciological Report No. 133/134, EKK of SCNAT, doi: 10.18752/glrep_133-134.
CH	GIETRO	367	19349999	20039999	5.549			-68000		Bauder, A., et al., 2007, Ann. Glaciol., 46, 145-149, 10.3189/172756407782871701
CH	GIETRO	367	19970915	20030802	5.549	-156		-20925	Andreas Bauder	GLAMOS (2016): The Swiss Glaciers 2011/12 and 2012/13, Bauder, A. (ed.), Glaciological Report No. 133/134, EKK of SCNAT, doi: 10.18752/glrep_133-134.
CH	GIETRO	367	19971015	20030915	5.549	0	-3290			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Bauder, A., et al., 2007, Ann. Glaciol., 46, 145-149, 10.3189/172756407782871701
CH	GIETRO	367	20030802	20080829	5.469	-80		-23846	Andreas Bauder	GLAMOS (2016): The Swiss Glaciers 2011/12 and 2012/13, Bauder, A. (ed.), Glaciological Report No. 133/134, EKK of SCNAT, doi: 10.18752/glrep_133-134.
CH	GIETRO	367	19839999	20109999	5.159	-1000	-18280	-100580	M. Fischer	Fischer, Huss, and Hoelzle (2015): The Cryosphere, 9, 525-540, https://doi. org/10.5194/tc-9-525-2015.
CH	GIETRO	367	20080829	20130821	5.35	-119		-27818	Andreas Bauder	GLAMOS (2016): The Swiss Glaciers 2011/12 and 2012/13, Bauder, A. (ed.), Glaciological Report No. 133/134, EKK of SCNAT, doi: 10.18752/glrep_133-134.
CH	GRIES	359	18849999	19230915	7.857	0	-25460			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Bauder, A., et al., 2007, Ann. Glaciol., 46, 145-149, 10.3189/172756407782871701
CH	GRIES	359	19239999	19610920	6.657	-1062		-217286	Andreas Bauder	GLAMOS (2016): The Swiss Glaciers 2011/12 and 2012/13, Bauder, A. (ed.), Glaciological Report No. 133/134, EKK of SCNAT, doi: 10.18752/glrep_133-134.

PU	GLACIER_NAME	WGMS_ID	FROM	TO	AREA	AREA_CHG	THICKNESS_CHG	VOLUME_CHG	INVESTIGATORS_(SPONS_AGENCY)	REFERENCES
CH	GRIES	359	19230915	19611015	6.69	-1170	-25360			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Bauder, A., et al., 2007, Ann. Glaciol., 46, 145-149, 10.3189/172756407782871701
CH	GRIES	359	19239999	19619999	6.69	-1167	-31540	-247810		WGMS (1998): FoG 1990-1995 (Vol. VII).
CH	GRIES	359	19611015	19670915	6.572	-120	-1930			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Bauder, A., et al., 2007, Ann. Glaciol., 46, 145-149, 10.3189/172756407782871701
CH	GRIES	359	19610920	19670901	6.422	-235		-11233	Andreas Bauder	GLAMOS (2016): The Swiss Glaciers 2011/12 and 2012/13, Bauder, A. (ed.), Glaciological Report No. 133/134, EKK of SCNAT, doi: 10.18752/glrep_133-134.
CH	GRIES	359	19670915	19790815	6.337	-240	180			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Bauder, A., et al., 2007, Ann. Glaciol., 46, 145-149, 10.3189/172756407782871701
CH	GRIES	359	19670901	19790815	6.362	-60		1579	Andreas Bauder	GLAMOS (2016): The Swiss Glaciers 2011/12 and 2012/13, Bauder, A. (ed.), Glaciological Report No. 133/134, EKK of SCNAT, doi: 10.18752/glrep_133-134.
CH	GRIES	359	19619999	19799999	6.337	-353	-1800	-12042		WGMS (1998): FoG 1990-1995 (Vol. VII).
CH	GRIES	359	19610701	19790701	6.337	-350	-1800			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Funk, M., et al., 1997, Z. Gletsch.kd. Glazialgeol., 33, 41-56
CH	GRIES	359	19790815	19860923	6.078	-284		-25496	Andreas Bauder	GLAMOS (2016): The Swiss Glaciers 2011/12 and 2012/13, Bauder, A. (ed.), Glaciological Report No. 133/134, EKK of SCNAT, doi: 10.18752/glrep_133-134.
CH	GRIES	359	19790701	19860701	6.249	-90	-2590			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Funk, M., et al., 1997, Z. Gletsch.kd. Glazialgeol., 33, 41-56
CH	GRIES	359	19790815	19861015	6.249	-90	-3770			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Bauder, A., et al., 2007, Ann. Glaciol., 46, 145-149, 10.3189/172756407782871701
CH	GRIES	359	19799999	19869999	6.249	-88	-2590	-16413		WGMS (1998): FoG 1990-1995 (Vol. VII).
CH	GRIES	359	19869999	19919999	6.194	-55	-6650	-41556		WGMS (1998): FoG 1990-1995 (Vol. VII).
CH	GRIES	359	19861015	19911015	6.194	-50	-6120			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Bauder, A., et al., 2007, Ann. Glaciol., 46, 145-149, 10.3189/172756407782871701
CH	GRIES	359	19860701	19910701	6.194	-50	-6650			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Funk, M., et al., 1997, Z. Gletsch.kd. Glazialgeol., 33, 41-56
CH	GRIES	359	19860923	19910910	5.798	-280		-41536	Andreas Bauder	GLAMOS (2016): The Swiss Glaciers 2011/12 and 2012/13, Bauder, A. (ed.), Glaciological Report No. 133/134, EKK of SCNAT, doi: 10.18752/glrep_133-134.
CH	GRIES	359	19911015	19980915	5.652	-540	-6130			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Bauder, A., et al., 2007, Ann. Glaciol., 46, 145-149, 10.3189/172756407782871701
CH	GRIES	359	19910910	19980831	5.769	-29		-40891	Andreas Bauder	GLAMOS (2016): The Swiss Glaciers 2011/12 and 2012/13, Bauder, A. (ed.), Glaciological Report No. 133/134, EKK of SCNAT, doi: 10.18752/glrep_133-134.
CH	GRIES	359	19980915	20030915	5.264	-390	-5050			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Bauder, A., et al., 2007, Ann. Glaciol., 46, 145-149, 10.3189/172756407782871701
CH	GRIES	359	18849999	20039999	5.264			-621000		Bauder, A., et al., 2007, Ann. Glaciol., 46, 145-149, 10.3189/172756407782871701
CH	GRIES	359	19980831	20030823	5.264	-505		-26186	Andreas Bauder	GLAMOS (2016): The Swiss Glaciers 2011/12 and 2012/13, Bauder, A. (ed.), Glaciological Report No. 133/134, EKK of SCNAT, doi: 10.18752/glrep_133-134.
CH	GRIES	359	20039999	20079999			-2106			WGMS (2012): FoG 2005-2010 (Vol. X).
CH	GRIES	359	20030823	20070912	4.969	-295		-38903	Andreas Bauder	GLAMOS (2016): The Swiss Glaciers 2011/12 and 2012/13, Bauder, A. (ed.), Glaciological Report No. 133/134, EKK of SCNAT, doi: 10.18752/glrep_133-134.
CH	GRIES	359	19819999	20099999	4.785	-2000	-36450	-204240	M. Fischer	Fischer, Huss, and Hoelzle (2015): The Cryosphere, 9, 525-540, https://doi.org/10.5194/tc-9-525-2015.
CH	GRIES	359	20070912	20120827	5.138	169		-43149	Andreas Bauder	GLAMOS (2016): The Swiss Glaciers 2011/12 and 2012/13, Bauder, A. (ed.), Glaciological Report No. 133/134, EKK of SCNAT, doi: 10.18752/glrep_133-134.
CH	HOHLAUB	3332	18799999	19320701	2.89	0	-12270			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Bauder, A., et al., 2007, Ann. Glaciol., 46, 145-149, 10.3189/172756407782871701
CH	HOHLAUB	3332	19320701	19460701	2.76	-130	-2940			PSFG (1967): FoG 1959-1965 (Vol. I).
CH	HOHLAUB	3332	19329999	19560915	2.421	-566		-24010	Andreas Bauder	GLAMOS (2016): The Swiss Glaciers 2011/12 and 2012/13, Bauder, A. (ed.), Glaciological Report No. 133/134, EKK of SCNAT, doi: 10.18752/glrep_133-134.
CH	HOHLAUB	3332	18799999	19560915	2.49	-400	-20910			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Bauder, A., et al., 2007, Ann. Glaciol., 46, 145-149, 10.3189/172756407782871701
CH	HOHLAUB	3332	19460701	19560701	2.49	-270	-5700			PSFG (1967): FoG 1959-1965 (Vol. I).
CH	HOHLAUB	3332	19560915	19670815	2.51	20	-10			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Bauder, A., et al., 2007, Ann. Glaciol., 46, 145-149, 10.3189/172756407782871701

PU	GLACIER_NAME	WGMS_ID	FROM	TO	AREA	AREA_CHG	THICKNESS_CHG	VOLUME_CHG	INVESTIGATORS_(SPONS_AGENCY)	REFERENCES
CH	HOHLAUB	3332	19560701	19670701	2.51	20	100			PSFG (1973): FoG 1965-1970 (Vol. II).
CH	HOHLAUB	3332	19560915	19670821	2.426	5		887	Andreas Bauder	GLAMOS (2016): The Swiss Glaciers 2011/12 and 2012/13, Bauder, A. (ed.), Glaciological Report No. 133/134, EKK of SCNAT, doi: 10.18752/glrep_133-134.
CH	HOHLAUB	3332	19670815	19821015	2.441	-70	3860			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Bauder, A., et al., 2007, Ann. Glaciol., 46, 145-149, 10.3189/172756407782871701
CH	HOHLAUB	3332	19670821	19820917	2.505	79		10428	Andreas Bauder	GLAMOS (2016): The Swiss Glaciers 2011/12 and 2012/13, Bauder, A. (ed.), Glaciological Report No. 133/134, EKK of SCNAT, doi: 10.18752/glrep_133-134.
CH	HOHLAUB	3332	19821015	19911015	2.345	-100	-7630			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Bauder, A., et al., 2007, Ann. Glaciol., 46, 145-149, 10.3189/172756407782871701
CH	HOHLAUB	3332	19820917	19910910	2.408	-97		-21107	Andreas Bauder	GLAMOS (2016): The Swiss Glaciers 2011/12 and 2012/13, Bauder, A. (ed.), Glaciological Report No. 133/134, EKK of SCNAT, doi: 10.18752/glrep_133-134.
CH	HOHLAUB	3332	19910910	19990902	2.415	7		-5547	Andreas Bauder	GLAMOS (2016): The Swiss Glaciers 2011/12 and 2012/13, Bauder, A. (ed.), Glaciological Report No. 133/134, EKK of SCNAT, doi: 10.18752/glrep_133-134.
CH	HOHLAUB	3332	19911015	19991015	2.29	-60	-2000			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Bauder, A., et al., 2007, Ann. Glaciol., 46, 145-149, 10.3189/172756407782871701
CH	HOHLAUB	3332	19990902	20040907	2.256	-159		-6425	Andreas Bauder	GLAMOS (2016): The Swiss Glaciers 2011/12 and 2012/13, Bauder, A. (ed.), Glaciological Report No. 133/134, EKK of SCNAT, doi: 10.18752/glrep_133-134.
CH	HOHLAUB	3332	18799999	20049999	2.256			-94000		Bauder, A., et al., 2007, Ann. Glaciol., 46, 145-149, 10.3189/172756407782871701
CH	HOHLAUB	3332	19991015	20041015	2.256	-30	-2420			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Bauder, A., et al., 2007, Ann. Glaciol., 46, 145-149, 10.3189/172756407782871701
CH	HOHLAUB	3332	20040907	20080829	2.185	-71		-5879	Andreas Bauder	GLAMOS (2016): The Swiss Glaciers 2011/12 and 2012/13, Bauder, A. (ed.), Glaciological Report No. 133/134, EKK of SCNAT, doi: 10.18752/glrep_133-134.
CH	HOHLAUB	3332	20080829	20120920	2.143	-42		-10954	Andreas Bauder	GLAMOS (2016): The Swiss Glaciers 2011/12 and 2012/13, Bauder, A. (ed.), Glaciological Report No. 133/134, EKK of SCNAT, doi: 10.18752/glrep_133-134.
CH	MURTEL VADRET DAL	4339	19919999	20099999	0.301	0	-23520	-9063	M. Fischer	Fischer, Huss, and Hoelzle (2015): The Cryosphere, 9, 525-540, https://doi.org/10.5194/tc-9-525-2015.
CH	PIZOL	417	19681018	19730810	0.176	-67		-425	Andreas Bauder	GLAMOS (2016): The Swiss Glaciers 2011/12 and 2012/13, Bauder, A. (ed.), Glaciological Report No. 133/134, EKK of SCNAT, doi: 10.18752/glrep_133-134.
CH	PIZOL	417	19730810	19790919	0.19	14		70	Andreas Bauder	GLAMOS (2016): The Swiss Glaciers 2011/12 and 2012/13, Bauder, A. (ed.), Glaciological Report No. 133/134, EKK of SCNAT, doi: 10.18752/glrep_133-134.
CH	PIZOL	417	19790919	19850912	0.212	22		376	Andreas Bauder	GLAMOS (2016): The Swiss Glaciers 2011/12 and 2012/13, Bauder, A. (ed.), Glaciological Report No. 133/134, EKK of SCNAT, doi: 10.18752/glrep_133-134.
CH	PIZOL	417	19850912	19900803	0.192	-20		-346	Andreas Bauder	GLAMOS (2016): The Swiss Glaciers 2011/12 and 2012/13, Bauder, A. (ed.), Glaciological Report No. 133/134, EKK of SCNAT, doi: 10.18752/glrep_133-134.
CH	PIZOL	417	19900803	19970915	0.128	-64		-854	Andreas Bauder	GLAMOS (2016): The Swiss Glaciers 2011/12 and 2012/13, Bauder, A. (ed.), Glaciological Report No. 133/134, EKK of SCNAT, doi: 10.18752/glrep_133-134.
CH	PIZOL	417	19970915	20060905	0.077	-51		-823	Andreas Bauder	GLAMOS (2016): The Swiss Glaciers 2011/12 and 2012/13, Bauder, A. (ed.), Glaciological Report No. 133/134, EKK of SCNAT, doi: 10.18752/glrep_133-134.
CH	PIZOL	417	19619999	20089999	0.086	0	-11900	-2246	M. Fischer	Fischer, Huss, and Hoelzle (2015): The Cryosphere, 9, 525-540, https://doi.org/10.5194/tc-9-525-2015.
CH	RHONE	473	18789999	19290915	16.45	0	-11070			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Bauder, A., et al., 2007, Ann. Glaciol., 46, 145-149, 10.3189/172756407782871701
CH	RHONE	473	19299999	19590903	17.144	-1097		-182776	Andreas Bauder	GLAMOS (2016): The Swiss Glaciers 2011/12 and 2012/13, Bauder, A. (ed.), Glaciological Report No. 133/134, EKK of SCNAT, doi: 10.18752/glrep_133-134.
CH	RHONE	473	19290915	19590915	16.45	0	-9300			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Bauder, A., et al., 2007, Ann. Glaciol., 46, 145-149, 10.3189/172756407782871701
CH	RHONE	473	18829999	19699999	18.43	-4370	-20000			
CH	RHONE	473	18789999	19690701	18.43	-4370	-21500			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Chen, J., and M. Funk, 1990, J. Glaciol., 36, 199-209, 10.3198/1990JoG36-123-199-209
CH	RHONE	473	19590915	19801015	16.45	0	2780			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Bauder, A., et al., 2007, Ann. Glaciol., 46, 145-149, 10.3189/172756407782871701

PU	GLACIER_NAME	WGMS_ID	FROM	TO	AREA	AREA_CHG	THICKNESS_CHG	VOLUME_CHG	INVESTIGATORS_(SPONS_AGENCY)	REFERENCES
CH	RHONE	473	19590903	19800915	17.323	179		59169	Andreas Bauder	GLAMOS (2016): The Swiss Glaciers 2011/12 and 2012/13, Bauder, A. (ed.), Glaciological Report No. 133/134, EKK of SCNAT, doi: 10.18752/glrep_133-134.
CH	RHONE	473	19801015	19911015	16.45	0	-7880			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Bauder, A., et al., 2007, Ann. Glaciol., 46, 145-149, 10.3189/172756407782871701
CH	RHONE	473	19800915	19910910	16.757	-566		-149719	Andreas Bauder	GLAMOS (2016): The Swiss Glaciers 2011/12 and 2012/13, Bauder, A. (ed.), Glaciological Report No. 133/134, EKK of SCNAT, doi: 10.18752/glrep_133-134.
CH	RHONE	473	19911015	20000915	16.45	0	-3730			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Bauder, A., et al., 2007, Ann. Glaciol., 46, 145-149, 10.3189/172756407782871701
CH	RHONE	473	18749999	20009999	16.45			-588000		Bauder, A., et al., 2007, Ann. Glaciol., 46, 145-149, 10.3189/172756407782871701
CH	RHONE	473	19910910	20000824	16.45	-307		-66261	Andreas Bauder	GLAMOS (2016): The Swiss Glaciers 2011/12 and 2012/13, Bauder, A. (ed.), Glaciological Report No. 133/134, EKK of SCNAT, doi: 10.18752/glrep_133-134.
CH	RHONE	473	20000824	20070912	15.933	-517		-114810	Andreas Bauder	GLAMOS (2016): The Swiss Glaciers 2011/12 and 2012/13, Bauder, A. (ed.), Glaciological Report No. 133/134, EKK of SCNAT, doi: 10.18752/glrep_133-134.
CH	RHONE	473	19869999	20109999	15.296	-2000	-20810	-340566	M. Fischer	Fischer, Huss, and Hoelzle (2015): The Cryosphere, 9, 525-540, https://doi.org/10.5194/tc-9-525-2015.
CH	SANKT ANNA	432	19869999	20109999	0.217	0	-22520	-7377	M. Fischer	Fischer, Huss, and Hoelzle (2015): The Cryosphere, 9, 525-540, https://doi.org/10.5194/tc-9-525-2015.
CH	SCHWARZBACH	4340	19909999	20109999	0.059	0	-26130	-3160	M. Fischer	Fischer, Huss, and Hoelzle (2015): The Cryosphere, 9, 525-540, https://doi.org/10.5194/tc-9-525-2015.
CH	SCHWARZBERG	395	18799999	19320701	7.43	0	-5030			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Bauder, A., et al., 2007, Ann. Glaciol., 46, 145-149, 10.3189/172756407782871701
CH	SCHWARZBERG	395	19320701	19460701	7.01	-420	-1540			PSFG (1967): FoG 1959-1965 (Vol. I).
CH	SCHWARZBERG	395	19321006	19560915	5.58	-1763		-58828	Andreas Bauder	GLAMOS (2016): The Swiss Glaciers 2011/12 and 2012/13, Bauder, A. (ed.), Glaciological Report No. 133/134, EKK of SCNAT, doi: 10.18752/glrep_133-134.
CH	SCHWARZBERG	395	18799999	19560915	6.48	-950	-11370			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Bauder, A., et al., 2007, Ann. Glaciol., 46, 145-149, 10.3189/172756407782871701
CH	SCHWARZBERG	395	19460701	19560701	6.48	-530	-4800			PSFG (1967): FoG 1959-1965 (Vol. I).
CH	SCHWARZBERG	395	19560915	19670915	6.296	-160	-1020			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Bauder, A., et al., 2007, Ann. Glaciol., 46, 145-149, 10.3189/172756407782871701
CH	SCHWARZBERG	395	19560701	19670701	6.296	-160	-300			PSFG (1973): FoG 1965-1970 (Vol. II).
CH	SCHWARZBERG	395	19560915	19670821	5.473	-107		-5819	Andreas Bauder	GLAMOS (2016): The Swiss Glaciers 2011/12 and 2012/13, Bauder, A. (ed.), Glaciological Report No. 133/134, EKK of SCNAT, doi: 10.18752/glrep_133-134.
CH	SCHWARZBERG	395	19670821	19820917	6.232	759		35295	Andreas Bauder	GLAMOS (2016): The Swiss Glaciers 2011/12 and 2012/13, Bauder, A. (ed.), Glaciological Report No. 133/134, EKK of SCNAT, doi: 10.18752/glrep_133-134.
CH	SCHWARZBERG	395	19670915	19821015	5.905	-390	5190			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Bauder, A., et al., 2007, Ann. Glaciol., 46, 145-149, 10.3189/172756407782871701
CH	SCHWARZBERG	395	19820917	19910910	5.521	-711		-38296	Andreas Bauder	GLAMOS (2016): The Swiss Glaciers 2011/12 and 2012/13, Bauder, A. (ed.), Glaciological Report No. 133/134, EKK of SCNAT, doi: 10.18752/glrep_133-134.
CH	SCHWARZBERG	395	19821015	19911015	5.671	-230	-5850			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Bauder, A., et al., 2007, Ann. Glaciol., 46, 145-149, 10.3189/172756407782871701
CH	SCHWARZBERG	395	19911015	19990915	5.462	-210	-3210			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Bauder, A., et al., 2007, Ann. Glaciol., 46, 145-149, 10.3189/172756407782871701
CH	SCHWARZBERG	395	19910910	19990902	5.496	-25		-19567	Andreas Bauder	GLAMOS (2016): The Swiss Glaciers 2011/12 and 2012/13, Bauder, A. (ed.), Glaciological Report No. 133/134, EKK of SCNAT, doi: 10.18752/glrep_133-134.
CH	SCHWARZBERG	395	18799999	20049999	5.332			-136000		Bauder, A., et al., 2007, Ann. Glaciol., 46, 145-149, 10.3189/172756407782871701
CH	SCHWARZBERG	395	19990915	20041015	5.332	-130	-3100			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Bauder, A., et al., 2007, Ann. Glaciol., 46, 145-149, 10.3189/172756407782871701
CH	SCHWARZBERG	395	19990902	20040907	5.332	-164		-18572	Andreas Bauder	GLAMOS (2016): The Swiss Glaciers 2011/12 and 2012/13, Bauder, A. (ed.), Glaciological Report No. 133/134, EKK of SCNAT, doi: 10.18752/glrep_133-134.
CH	SCHWARZBERG	395	20040907	20080829	5.305	-27		-23312	Andreas Bauder	GLAMOS (2016): The Swiss Glaciers 2011/12 and 2012/13, Bauder, A. (ed.), Glaciological Report No. 133/134, EKK of SCNAT, doi: 10.18752/glrep_133-134.
CH	SCHWARZBERG	395	19829999	20099999	5.154	0	-20650	-109767	M. Fischer	Fischer, Huss, and Hoelzle (2015): The Cryosphere, 9, 525-540, https://doi.org/10.5194/tc-9-525-2015.

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CH	SCHWARZBERG	395	20080829	20120920	5.175	-130		-22993	Andreas Bauder	GLAMOS (2016): The Swiss Glaciers 2011/12 and 2012/13, Bauder, A. (ed.), Glaciological Report No. 133/134, EKK of SCNAT, doi: 10.18752/glrep_133-134.
CH	SEX ROUGE	454	19619999	20109999	0.269	0	-16140	-7766	M. Fischer	Fischer, Huss, and Hoelzle (2015): The Cryosphere, 9, 525-540, https://doi.org/10.5194/tc-9-525-2015.
CH	SILVRETTA	408	18939999	19380915	3.726	0	-5810			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Bauder, A., et al., 2007, Ann. Glaciol., 46, 145-149, 10.3189/172756407782871701
CH	SILVRETTA	408	19380701	19560701	3.33	-400	-9200			PSFG (1967): FoG 1959-1965 (Vol. I).
CH	SILVRETTA	408	19389999	19590831	3.228	-329		-28666	Andreas Bauder	GLAMOS (2016): The Swiss Glaciers 2011/12 and 2012/13, Bauder, A. (ed.), Glaciological Report No. 133/134, EKK of SCNAT, doi: 10.18752/glrep_133-134.
CH	SILVRETTA	408	19380915	19590815	3.22	-510	-7210			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Bauder, A., et al., 2007, Ann. Glaciol., 46, 145-149, 10.3189/172756407782871701
CH	SILVRETTA	408	19599999	19739999			-1285			
CH	SILVRETTA	408	19590831	19730912	3.147	-81		-4822	Andreas Bauder	GLAMOS (2016): The Swiss Glaciers 2011/12 and 2012/13, Bauder, A. (ed.), Glaciological Report No. 133/134, EKK of SCNAT, doi: 10.18752/glrep_133-134.
CH	SILVRETTA	408	19730912	19860929	3.139	-8		9488	Andreas Bauder	GLAMOS (2016): The Swiss Glaciers 2011/12 and 2012/13, Bauder, A. (ed.), Glaciological Report No. 133/134, EKK of SCNAT, doi: 10.18752/glrep_133-134.
CH	SILVRETTA	408	19739999	19869999			3518			
CH	SILVRETTA	408	19869999	19949999			-8038			
CH	SILVRETTA	408	19860929	19940823	3.01	-129		-20021	Andreas Bauder	GLAMOS (2016): The Swiss Glaciers 2011/12 and 2012/13, Bauder, A. (ed.), Glaciological Report No. 133/134, EKK of SCNAT, doi: 10.18752/glrep_133-134.
CH	SILVRETTA	408	19949999	20039999			-6109			
CH	SILVRETTA	408	19940823	20030813	2.893	-117		-13992	Andreas Bauder	GLAMOS (2016): The Swiss Glaciers 2011/12 and 2012/13, Bauder, A. (ed.), Glaciological Report No. 133/134, EKK of SCNAT, doi: 10.18752/glrep_133-134.
CH	SILVRETTA	408	18939999	20039999	2.893			-85000		Bauder, A., et al., 2007, Ann. Glaciol., 46, 145-149, 10.3189/172756407782871701
CH	SILVRETTA	408	20039999	20079999			-4856			WGMS (2012): FoG 2005-2010 (Vol. X).
CH	SILVRETTA	408	20030813	20070924	2.786	-107		-14422	Andreas Bauder	GLAMOS (2016): The Swiss Glaciers 2011/12 and 2012/13, Bauder, A. (ed.), Glaciological Report No. 133/134, EKK of SCNAT, doi: 10.18752/glrep_133-134.
CH	SILVRETTA	408	19859999	20089999	2.665	-1000	-16200	-47921	M. Fischer	Fischer, Huss, and Hoelzle (2015): The Cryosphere, 9, 525-540, https://doi.org/10.5194/tc-9-525-2015.
CH	SILVRETTA	408	20070924	20120820	2.71	-76		-16457	Andreas Bauder	GLAMOS (2016): The Swiss Glaciers 2011/12 and 2012/13, Bauder, A. (ed.), Glaciological Report No. 133/134, EKK of SCNAT, doi: 10.18752/glrep_133-134.
CH	TSANFLEURON	371	19749999	20109999	2.595	-1000	-33000	-105809	M. Fischer	Fischer, Huss, and Hoelzle (2015): The Cryosphere, 9, 525-540, https://doi.org/10.5194/tc-9-525-2015.
CL - Chile										
CL	AMARILLO	3905	20000216	20120312	0.447		-437	-195	Thorsten Seehaus	Braun et al. 2019; Nature Climate Change 9, 130-136, DOI:10.1038/s41558-018-0375-6638
CL	AMARILLO	3905	20140305	20150399	0.173	-13	-1548	-278	Gabriel Cabrera	WGMS (2017): GGCB No. 2 (2014-2015).
CL	ECHAURREN NORTE	1344	20000216	20120226	0.341		-5905	-2013	Thorsten Seehaus	Braun et al. 2019; Nature Climate Change 9, 130-136, DOI:10.1038/s41558-018-0375-5955
CN - China										
CN	PARLUNG NO. 94	3987	20009999	20169999			-20360		Fanny Brun	Brun et al. (2017); Nature Geoscience, 10(9), 668-673, 10.1038/NGEO2999.
CN	URUMQI GLACIER NO. 1	853	20060824	20150911	1.034		-5455		Martina Barandun, Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
CO - Colombia										
CO	CONEJERAS	2721	20060403	20070101	0.218		-2656		Jorge Luis Ceballos	
CO	CONEJERAS	2721	20070101	20080101	0.234	-3909	-1624		Jorge Luis Ceballos	
CO	CONEJERAS	2721	20080101	20090101	0.23	-3822	-539		Jorge Luis Ceballos	
CO	CONEJERAS	2721	20091299	20100101	0.226	-3903	-3452		Jorge Luis Ceballos	
CO	CONEJERAS	2721	20100101	20110101	0.221	-4362	-3982		Jorge Luis Ceballos	
CO	CONEJERAS	2721	20110101	20120101	0.217	-4362	-1080		Jorge Luis Ceballos	
CO	CONEJERAS	2721	20120101	20130101	0.201	-381	-2536		Jorge Luis Ceballos	
CO	CONEJERAS	2721	20130101	20140101	0.2	-616	-4027		Jorge Luis Ceballos	
CO	CONEJERAS	2721	20140101	20150101	0.2	-517	-4539		Jorge Luis Ceballos	WGMS (2017): GGCB No. 2 (2014-2015).
CO	CONEJERAS	2721	20150101	20160101	0.199	-110	-6211		Jorge Luis Ceballos	WGMS (2017): GGCB No. 2 (2014-2015).
CO	CONEJERAS	2721	20160101	20170101	0.158		-6200		Jorge Luis Ceballos, Francisco Rojas	
CO	CONEJERAS	2721	20160301	20170122	0.141	-13522	-4479		Jorge Luis Ceballos, Alejandro Ospina	
CO	RITACUBA BLANCO	2763	20090101	20100101	0.362	0	-961		Jorge Luis Ceballos	
CO	RITACUBA BLANCO	2763	20100101	20110101	0.362	0	-635		Jorge Luis Ceballos	
CO	RITACUBA BLANCO	2763	20110101	20120101	0.362	0	-71		Jorge Luis Ceballos	
CO	RITACUBA BLANCO	2763	20120101	20130101	0.362	0	1215		Jorge Luis Ceballos	
CO	RITACUBA BLANCO	2763	20130114	20140217	0.363	0	-901		Jorge Luis Ceballos, Francisco Rojas	
CO	RITACUBA BLANCO	2763	20140217	20150302	0.363	0	-519		Jorge Luis Ceballos, Francisco Rojas	
CO	RITACUBA BLANCO	2763	20150302	20160223	0.363	0	-527		Jorge Luis Ceballos, Francisco Rojas	
CO	RITACUBA BLANCO	2763	20160223	20170213	0.363	0	-966		Jorge Luis Ceballos, Francisco Rojas	
CO	RITACUBA BLANCO	2763	20170213	20180214	0.363	0	364		Jorge Luis Ceballos, Francisco Rojas	

PU	GLACIER_NAME	WGMS_ID	FROM	TO	AREA	AREA_CHG	THICKNESS_CHG	VOLUME_CHG	INVESTIGATORS_(SPONS_AGENCY)	REFERENCES
EC - Ecuador										
EC	ANTIZANA15ALPHA	1624	19569999	19659999	0.44	-26	-2550		Bolívar Cáceres, Antoine Rabatel	Rabatel, A., and {27 others}, 2013, Cryosphere, 7, 81-102, 10.5194/tc-7-81-2013
EC	ANTIZANA15ALPHA	1624	19659999	19939999	0.375	-64	-4550		Bolívar Cáceres, Antoine Rabatel	Rabatel, A., and {27 others}, 2013, Cryosphere, 7, 81-102, 10.5194/tc-7-81-2013
EC	ANTIZANA15ALPHA	1624	19939999	19979999	0.341	-35	-2670		Bolívar Cáceres, Antoine Rabatel	Rabatel, A., and {27 others}, 2013, Cryosphere, 7, 81-102, 10.5194/tc-7-81-2013
ES - Spain										
ES	MALADETA	942	19810915	19990915	0.445	-40	-5440			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Chueca, J., et al., 2007, J. Glaciol., 53, 547-557, 10.3189/002214307784409342
ES	MALADETA	942	19940818	20010913	0.377	-41		-2597	Guillermo Cobos Campos	WGMS (2012): FoG 2005-2010 (Vol. X).
ES	MALADETA	942	20010913	20020927	0.366	-11		-495	Guillermo Cobos Campos	WGMS (2012): FoG 2005-2010 (Vol. X).
ES	MALADETA	942	20020927	20030918	0.355	-11		-903	Guillermo Cobos Campos	WGMS (2012): FoG 2005-2010 (Vol. X).
ES	MALADETA	942	20030918	20040831	0.345	-10		-685	Guillermo Cobos Campos	WGMS (2012): FoG 2005-2010 (Vol. X).
ES	MALADETA	942	20040831	20050902	0.328	-17		-968	Guillermo Cobos Campos	WGMS (2012): FoG 2005-2010 (Vol. X).
ES	MALADETA	942	20050902	20060917	0.313	-15		-992	Guillermo Cobos Campos	WGMS (2012): FoG 2005-2010 (Vol. X).
ES	MALADETA	942	20060917	20071022	0.276	-37		-593	Guillermo Cobos Campos	WGMS (2012): FoG 2005-2010 (Vol. X).
FR - France										
FR	ARGENTIERE	354	19799999	20039999	13.5		-365		Berthier, E.	Berthier, Dynamique et bilan de masse des glaciers de montagne (Alpes, Islande, Himalaya), Contribution de l'imagerie satellitaire, 2005
FR	ARGENTIERE	354	20030820	20120899			-1318		Berthier, E.	Berthier et al (2014), Glacier topography and elevation changes derived from Pléiades sub-meter stereo images, The Cryosphere, 8, doi:10.5194/tc-8-2275-2014
FR	SARENNES	357	19529999	19819999			-24222			Eckert, N., et al., 2011, J. Glaciol., 57, 134-150, 10.3189/002214311795306673
FR	SARENNES	357	19819999	19919999	0.525		-3000			Valla, F., and C. Piedallu, 1997, Ann. Glaciol., 24, 361-366
FR	SARENNES	357	19520801	20030920			-35889			Thibert, E., et al., 2008, J. Glaciol., 54, 522-532, 10.3189/002214308785837093
FR	SARENNES	357	19819999	20030920			-11666			Eckert, N., et al., 2011, J. Glaciol., 57, 134-150, 10.3189/002214311795306673
FR	TRE LA TETE	1314	20030824	20120899			-1576		Berthier, E.	Berthier et al (2014), Glacier topography and elevation changes derived from Pléiades sub-meter stereo images, The Cryosphere, 8, doi:10.5194/tc-8-2275-2018
GL - Greenland										
GL	MITTIVAKKAT	1629	19949999	20129999	15.8	-1800	-25000	-580000	Jakob Yde	Yde et al., J. Glaciol. (2014)
GL	MITTIVAKKAT	1629	19949999	20129999	15.8	-1800		-580000		Yde et al. (2014), J. Glaciol., 60 (224), p. 1199-1207, doi: 10.3189/2014JoG14J047.
IS - Iceland										
IS	BRUARJOKULL	3067	20101001	20150930	1528		-1832		Noel Gourmelen	Foresta, L., et al. (2016), Geophys. Res. Lett., 43, doi:10.1002/2016GL071485
IS	HOFSJOKULL E	3088	19860899	19990899	226.6	-7000	-4090	-500000	Thorstein Thorsteinsson	
IS	HOFSJOKULL E	3088	19990899	20040899	222.4	-4200	-9210	-1310000	Thorstein Thorsteinsson	
IS	HOFSJOKULL E	3088	20040899	20080903	217.9	-4500	-5370	-730000	Thorstein Thorsteinsson	
IS	HOFSJOKULL E	3088	20080903	20131013	212.5	-5400	-7980	-1070000	Thorstein Thorsteinsson	
IS	HOFSJOKULL SW	3090	20040814	20141103	68.068		-10823		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
IS	LANGJOKULL ICE CAP	3660	19970499	20040899	904		-12810			Pope et al. (2016); Journal of Glaciology, 62(233), 497-511.
IS	LANGJOKULL ICE CAP	3660	20040899	20070899	904		-1230			Pope et al. (2016); Journal of Glaciology, 62(233), 497-511.
IS	LANGJOKULL ICE CAP	3660	20101001	20150930	957		-4023		Noel Gourmelen	Foresta, L., et al. (2016), Geophys. Res. Lett., 43, doi:10.1002/2016GL071485
IT - Italy										
IT	CALDERONE	1107	20000930	20010928	0.05	2	-511	-26	Massimo Pecci, Alessio Rinaldini, Alessandra Marino, Mariano Ciucci, Sergio Bellagamba	WGMS (2008): FoG 2000-2005 (Vol. IX).
IT	CALDERONE	1107	20010928	20021003	0.033	-17	-1847	-61	Massimo Pecci, Alessio Rinaldini, Alessandra Marino, Mariano Ciucci, Sergio Bellagamba.	WGMS (2008): FoG 2000-2005 (Vol. IX).
IT	CALDERONE	1107	20021003	20031003	0.033	0	-264	-9	Massimo Pecci, Pinuccio D'Aquila	WGMS (2008): FoG 2000-2005 (Vol. IX).
IT	CALDERONE	1107	20031003	20041008	0.033	0	252	8	Massimo Pecci, Pinuccio D'Aquila	WGMS (2008): FoG 2000-2005 (Vol. IX).
IT	CALDERONE	1107	20041008	20050930	0.033	0	-194	-6	Massimo Pecci, Pinuccio D'Aquila	WGMS (2008): FoG 2000-2005 (Vol. IX).
IT	CALDERONE	1107	20050930	20060920	0.036	2	1090	39	Massimo Pecci, Pinuccio D'Aquila	WGMS (2012): FoG 2005-2010 (Vol. X).
IT	CALDERONE	1107	20060920	20070926	0.036	0	-1500	-54	Massimo Pecci, Pinuccio D'Aquila, Luca Lombardi, Thomas Zanoner	WGMS (2012): FoG 2005-2010 (Vol. X).
IT	CALDERONE	1107	20070925	20080918	0.036	0		10	Massimo Pecci, Pinuccio D'Aquila, Luca Lombardi	WGMS (2012): FoG 2005-2010 (Vol. X).
IT	CALDERONE	1107	20090910	20100918	0.036	0	693	25		WGMS (2012): FoG 2005-2010 (Vol. X).
IT	CALDERONE	1107	20100918	20110922	0.036	0		-30	Massimo Pecci, Andrea Barbolla, Francesco Armiento, Pinuccio D'Aquila, David Cappelletti, Angelo Grilli	WGMS (2015): GGCB No. 1 (2012-2013).
IT	CALDERONE	1107	20110922	20120922	0.036	0	-1563	-50		WGMS (2015): GGCB No. 1 (2012-2013).
IT	CALDERONE	1107	20120922	20130914	0.036	0	202	6	Massimo Pecci, Mattia Pecci, Pinuccio D'Aquila, David Cap	WGMS (2015): GGCB No. 1 (2012-2013).
IT	CALDERONE	1107	20130914	20140913	0.036	0	417	22268	Massimo Pecci, Mattia Pecci, Pinuccio D'Aquila, David Cap	WGMS (2017): GGCB No. 2 (2014-2015).
IT	CALDERONE	1107	20150912	20160915	0.022	-14	-1100	26045	Massimo Pecci, Pinuccio D'Aquila, David Cappelletti, Tiziano Caira, Giulio Esposito	
IT	CALDERONE	1107	20160915	20170909	0.026	4	-268	15396	Massimo Pecci, Pinuccio D'Aquila, David Cappelletti, Tiziano Caira, Giulio Esposito, Mattia Pecci	
IT	CAMPO SETT.	1106	20050905	20070921	0.32		-4471		Andrea Tamburini	WGMS (2012): FoG 2005-2010 (Vol. X).
IT	CAMPO SETT.	1106	20070921	20090906			-2230		Andrea Tamburini	WGMS (2012): FoG 2005-2010 (Vol. X).
IT	CARESER	635	19679999	19809999	4.83	147	-3040	-14651		WGMS (1988): FoG 1980-1985 (Vol. V).
IT	CARESER	635	19809999	19909999	3.858	-973	-11235	-54265		WGMS (1993): FoG 1985-1990 (Vol. VI).

PU	GLACIER_NAME	WGMS_ID	FROM	TO	AREA	AREA_CHG	THICKNESS_CHG	VOLUME_CHG	INVESTIGATORS_(SPONS_AGENCY)	REFERENCES
IT	CARESER	635	19679999	19901001	3.856	-864	-13760	-64956		Giada, M., and G. Zanon, 1995, Z. Gletsch. kd. Glazialgeol., 31, 143-147
IT	CARESER	635	19901015	19970701	3.362	-490	-7750	-29898	M. Giada and G. Zanon	WGMS (2005): FoG 1995-2000 (Vol. VIII).
IT	CARESER	635	19970701	20000701	3.026	-340	-7080	-23875	M. Giada and G. Zanon	WGMS (2005): FoG 1995-2000 (Vol. VIII).
IT	FONTANA BIANCA / WEISSBRUNNF.	1507	19620701	19970701	0.626	-60	-13560	-9346	G. Kaser	WGMS (2005): FoG 1995-2000 (Vol. VIII).
IT	LUNGA (VEDRETTA) / LANGENF.	661	20050999	20111004	1.659	-174	-8336	-15284	Stephan Galos, Christoph Klug, Lorenzo Rieg	Galos et al. (2017): The Cryosphere, 11, 1417-1439, https://doi.org/10.5194/tc-11-1417-2017.
IT	LUNGA (VEDRETTA) / LANGENF.	661	20111004	20130922	1.6	-59	-2204	-3657	Stephan Galos, Christoph Klug, Lorenzo Rieg	Galos et al. (2017): The Cryosphere, 11, 1417-1439, https://doi.org/10.5194/tc-11-1417-2017.
IT	LUNGA (VEDRETTA) / LANGENF.	661	20050999	20130922	1.6	-234	-10351	-18978	Stephan Galos, Christoph Klug, Lorenzo Rieg	Galos et al. (2017): The Cryosphere, 11, 1417-1439, https://doi.org/10.5194/tc-11-1417-2017.
IT	LUPO	1138	20081005	20090922	0.202		704		Riccardo Scotti, Fabio Villa	WGMS (2012): FoG 2005-2010 (Vol. X).
IT	LUPO	1138	20090922	20100922			408		Riccardo Scotti, Fabio Villa	WGMS (2012): FoG 2005-2010 (Vol. X).
IT	SURETTA MERID.	2488	20010825	20020831			-611		Andrea Tamburini	WGMS (2012): FoG 2005-2010 (Vol. X).
IT	SURETTA MERID.	2488	20020831	20030920	0.2		-3053		Andrea Tamburini	WGMS (2012): FoG 2005-2010 (Vol. X).
IT	SURETTA MERID.	2488	20030920	20040905			-567		Andrea Tamburini	WGMS (2012): FoG 2005-2010 (Vol. X).
IT	SURETTA MERID.	2488	20040905	20050903			-1298		Andrea Tamburini	WGMS (2012): FoG 2005-2010 (Vol. X).
IT	SURETTA MERID.	2488	20050903	20060910			-2707		Andrea Tamburini	WGMS (2012): FoG 2005-2010 (Vol. X).
IT	SURETTA MERID.	2488	20060910	20071013	0.18	-18	-2911		Andrea Tamburini	WGMS (2012): FoG 2005-2010 (Vol. X).
IT	SURETTA MERID.	2488	20071013	20081001			-382		Fabio Villa, Riccardo Scotti	WGMS (2012): FoG 2005-2010 (Vol. X).
IT	SURETTA MERID.	2488	20081001	20090920			-778		Fabio Villa, Riccardo Scotti	WGMS (2012): FoG 2005-2010 (Vol. X).
IT	SURETTA MERID.	2488	20090920	20111001			-2017		Fabio Villa, Livio Ruvo, Riccardo Scotti	WGMS (2015): GGCB No. 1 (2012-2013).
IT	SURETTA MERID.	2488	20111001	20120922			-1538		Fabio Villa, Livio Ruvo, Riccardo Scotti	WGMS (2015): GGCB No. 1 (2012-2013).
KG - Kyrgyzstan										
KG	ABRAMOV	732	20041004	20121010	21.345		-5750		Martina Barandun, Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
KG	ABRAMOV	732	20009999	20169999			-6728		Fanny Brun	Brun et al. (2017); Nature Geoscience, 10(9), 668-673, 10.1038/NGEO2999.
KG	ABRAMOV	732	20041004	20160919	21.345		-5550		Martina Barandun, Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
KG	ABRAMOV	732	20041004	20161005	21.345		-6618		Martina Barandun, Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
KG	ABRAMOV	732	20050921	20161005	21.345		-3919		Martina Barandun, Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
KG	BORDU	829	20021003	20120928	5.557		-8300		Martina Barandun, Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
KG	BORDU	829	20030819	20120928	5.557		-8842		Martina Barandun, Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
KG	BORDU	829	20009999	20169999			-4367		Fanny Brun	Brun et al. (2017); Nature Geoscience, 10(9), 668-673, 10.1038/NGEO2999.
KG	BORDU	829	20009999	20169999			-6818		Fanny Brun	Brun et al. (2017); Nature Geoscience, 10(9), 668-673, 10.1038/NGEO2999.
KG	GLACIER NO. 354 (AK-SHIYRAK)	3889	19641118	19730731			-471			Goerlich et al. (2017); Remote Sensing, 9(3), 275.
KG	GLACIER NO. 354 (AK-SHIYRAK)	3889	19730731	19800821			-7059			Goerlich et al. (2017); Remote Sensing, 9(3), 275.
KG	GLACIER NO. 354 (AK-SHIYRAK)	3889	19641118	19800821			-5176			Goerlich et al. (2017); Remote Sensing, 9(3), 275.
KG	GLACIER NO. 354 (AK-SHIYRAK)	3889	19730731	20000211			-22306			Pieczonka and Bolch (2015); Global and Planetary Change, 128, 1-13.
KG	GLACIER NO. 354 (AK-SHIYRAK)	3889	20031010	20120939	6.276		-4480	-28117584	Andreas Kääb, Marlene Kronen-berg, Martin Hoelzle	Kronenberg, M., et al., 2016, Ann. Glaciol., 57, 92-102, 10.3189/2016AoG71A032
KG	GLACIER NO. 354 (AK-SHIYRAK)	3889	20030819	20120928	6.537		-11131		Martina Barandun, Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
KG	GLACIER NO. 354 (AK-SHIYRAK)	3889	20021003	20120928	6.537		-9263		Martina Barandun, Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
KG	GLACIER NO. 354 (AK-SHIYRAK)	3889	20050621	20131010	6.537		-6191		Martina Barandun, Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
KG	GLACIER NO. 354 (AK-SHIYRAK)	3889	20009999	20169999			-8604		Fanny Brun	Brun et al. (2017); Nature Geoscience, 10(9), 668-673, 10.1038/NGEO2999.
KG	GOLUBIN	753	19649999	19999999	5.1	-500	-23100		Tobias Bolch	Bolch, T., 2015, Led i Sneg, 129, 28-39, 10.15356/IS.2015.01.03
KG	GOLUBIN	753	19999999	20129999			-2300		Tobias Bolch	Bolch, T., 2015, Led i Sneg, 129, 28-39, 10.15356/IS.2015.01.03
KG	GOLUBIN	753	20020627	20120910	4.827		-7577		Martina Barandun, Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
KG	GOLUBIN	753	20009999	20169999			-796		Fanny Brun	Brun et al. (2017); Nature Geoscience, 10(9), 668-673, 10.1038/NGEO2999.
KG	KARA-BATKAK	813	19730731	20000211			-15247			Pieczonka and Bolch (2015); Global and Planetary Change, 128, 1-13.
KG	KARA-BATKAK	813	20030819	20120928	2.046		5941		Martina Barandun, Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
KG	KARA-BATKAK	813	20009999	20169999			-7268		Fanny Brun	Brun et al. (2017); Nature Geoscience, 10(9), 668-673, 10.1038/NGEO2999.
KG	SARY TOR (NO.356)	805	19641118	19730731			-6118			Goerlich et al. (2017); Remote Sensing, 9(3), 275.
KG	SARY TOR (NO.356)	805	19430701	19770701	3.54	-80	-19400			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Kuz'michenok, V.A., 1988, Mater. Glyatsol. Issled., 62, 193-198
KG	SARY TOR (NO.356)	805	19641118	19800821			-4941			Goerlich et al. (2017); Remote Sensing, 9(3), 275.
KG	SARY TOR (NO.356)	805	19730731	19800821			-706			Goerlich et al. (2017); Remote Sensing, 9(3), 275.
KG	SARY TOR (NO.356)	805	19730731	20000211			-14400			Pieczonka and Bolch (2015); Global and Planetary Change, 128, 1-13.
KG	SARY TOR (NO.356)	805	20030819	20120928	2.925		-7051		Martina Barandun, Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
KG	SARY TOR (NO.356)	805	20021003	20120928	2.925		-5532		Martina Barandun, Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
KG	SARY TOR (NO.356)	805	20009999	20169999			-7665		Fanny Brun	Brun et al. (2017); Nature Geoscience, 10(9), 668-673, 10.1038/NGEO2999.

PU	GLACIER_NAME	WGMS_ID	FROM	TO	AREA	AREA_CHG	THICKNESS_CHG	VOLUME_CHG	INVESTIGATORS_(SPONS_AGENCY)	REFERENCES
KZ - Kazakhstan										
KZ	TS.TUYUKSUYSKIY	817	19909999	19919999	2.72			-2173	K.G. Makarevich	
KZ	TS.TUYUKSUYSKIY	817	19919999	19929999	2.72			-1103	K.G. Makarevich	
KZ	TS.TUYUKSUYSKIY	817	19929999	19939999	2.72			1406	K.G. Makarevich	
KZ	TS.TUYUKSUYSKIY	817	19959999	19969999	2.62	-32	-700	-966	P.A. Cherkasov	WGMS (2005): FoG 1995-2000 (Vol. VIII).
KZ	TS.TUYUKSUYSKIY	817	19969999	19979999	2.585	-27	-2020	-2893	P.A. Cherkasov	WGMS (2005): FoG 1995-2000 (Vol. VIII).
KZ	TS.TUYUKSUYSKIY	817	19580701	19980701	2.62	-470	-14610	-41700		Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Hagg, W.J., et al., 2004, J. Glaciol., 50, 505-510, 10.3189/172756504781829783
KZ	TS.TUYUKSUYSKIY	817	19979999	19989999	2.568	-17	-830	-1074	P.A. Cherkasov	WGMS (2005): FoG 1995-2000 (Vol. VIII).
KZ	TS.TUYUKSUYSKIY	817	19989999	19999999	2.561	-7	-390	-487	P.A. Cherkasov	WGMS (2005): FoG 1995-2000 (Vol. VIII).
KZ	TS.TUYUKSUYSKIY	817	19999999	20009999	2.549	-6	-380	-483	P.A. Cherkasov	WGMS (2005): FoG 1995-2000 (Vol. VIII).
KZ	TS.TUYUKSUYSKIY	817	20009999	20169999			-3706		Fanny Brun	Brun et al. (2017); Nature Geoscience, 10(9), 668-673, 10.1038/NGEO2999.
NO - Norway										
NO	AALFOTBREEN	317	19680805	19880907	4.175	-310	-3813		Bjarne Kjøllmoen	Andreassen et al. 2016, The Cryosphere, 10, 535-552, doi:10.5194/tc-10-535-2016.
NO	AALFOTBREEN	317	19680815	19880907	4.36	-370	-6400			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Oestrem and Haakensen, 1999, Geogr. Ann., 81A, 703-711, 10.1111/j.0435-3676.1999.00098.x
NO	AALFOTBREEN	317	19880907	19970814	4.479	304	9556		Bjarne Kjøllmoen	Andreassen et al. 2016, The Cryosphere, 10, 535-552, doi:10.5194/tc-10-535-2016.
NO	AALFOTBREEN	317	19970814	20100902	3.974	-504	-15823		Bjarne Kjøllmoen	Andreassen et al. 2016, The Cryosphere, 10, 535-552, doi:10.5194/tc-10-535-2016.
NO	AALFOTBREEN	317	20060821	20140922	3.972		-11006		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
NO	AUSTDALSBREEN	321	19880810	20091017	10.629	-668	-8890		Hallgeir Elvehøy	Andreassen et al., 2016, The Cryosphere, 10, 535-552, doi:10.5194/tc-10-535-2016.
NO	ENGABREEN	298	19680825	19850819			-2333			Haug, T., et al., 2009, Ann. Glaciol., 50, 119-125, 10.3189/172756409787769528
NO	ENGABREEN	298	19680825	20010924	37.26	-268	-1270		Hallgeir Elvehøy	Andreassen et al., 2016, The Cryosphere, 10, 535-552, doi:10.5194/tc-10-535-2016.
NO	ENGABREEN	298	19850819	20020820	40		-333			Haug, T., et al., 2009, Ann. Glaciol., 50, 119-125, 10.3189/172756409787769528
NO	ENGABREEN	298	20010924	20020823			-600	-25000		Geist, T., et al., 2005, Ann. Glaciol., 42, 195-201, 10.3189/172756405781812592
NO	ENGABREEN	298	20010924	20080902	36.84	-420	-3690		Hallgeir Elvehøy	Andreassen et al., 2016, The Cryosphere, 10, 535-552, doi:10.5194/tc-10-535-2016.
NO	GRAASUBREEN	299	19680827	19840823			-3889			Andreassen, L.M., et al., 2002, Ann. Glaciol., 34, 343-348, 10.3189/172756402781817626
NO	GRAASUBREEN	299	19840823	19970808	2.25	-1	-323		Liss M. Andreassen	Andreassen et al., 2016, The Cryosphere, 10, 535-552, doi:10.5194/tc-10-535-2016.
NO	GRAASUBREEN	299	19970808	20091017	2.12	-130	-7050		Liss M. Andreassen	Andreassen et al., 2016, The Cryosphere, 10, 535-552, doi:10.5194/tc-10-535-2016.
NO	GRAASUBREEN	299	20030420	20160608	2.166		-5470		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
NO	GRAASUBREEN	299	20030301	20160608	2.166		-2483		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
NO	HANSEBREEN	322	19880907	19970814	3.181	113	6869		Bjarne Kjøllmoen	Andreassen et al., 2016, The Cryosphere, 10, 535-552, doi:10.5194/tc-10-535-2016.
NO	HANSEBREEN	322	19970814	20100902	2.751	-429	-19705		Bjarne Kjøllmoen	Andreassen et al., 2016, The Cryosphere, 10, 535-552, doi:10.5194/tc-10-535-2016.
NO	HANSEBREEN	322	20030425	20140829	2.908		-19830		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
NO	HANSEBREEN	322	20060316	20140829	2.908		-12507		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
NO	HANSEBREEN	322	20010419	20140829	2.908		-19697		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
NO	HANSEBREEN	322	20040808	20140922	2.908		-18353		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
NO	HANSEBREEN	322	20040808	20140708	2.908		-12426		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
NO	HANSEBREEN	322	20040808	20140829	2.908		-14969		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
NO	HANSEBREEN	322	20040808	20150823	2.908		-13073		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
NO	HANSEBREEN	322	20030425	20150823	2.908		-19372		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
NO	HANSEBREEN	322	20060316	20150823	2.908		-10685		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
NO	HANSEBREEN	322	20010419	20150823	2.908		-20404		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
NO	HANSEBREEN	322	20080420	20160816	2.908		-2277		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
NO	HELLSTUGUBREEN	300	19680827	19800928	3.13	-400	-6440			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Andreassen, L.M., et al., 2002, Ann. Glaciol., 34, 343-348, 10.3189/172756402781817626
NO	HELLSTUGUBREEN	300	19680827	19800926	3.061	-279	-5928		Liss M. Andreassen	Andreassen et al., 2016, The Cryosphere, 10, 535-552, doi:10.5194/tc-10-535-2016.
NO	HELLSTUGUBREEN	300	19800928	19970808	3	0	-2220			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Andreassen, L.M., et al., 2002, Ann. Glaciol., 34, 343-348, 10.3189/172756402781817626
NO	HELLSTUGUBREEN	300	19800926	19970808	3.029	-32	-262		Liss M. Andreassen	Andreassen et al., 2016, The Cryosphere, 10, 535-552, doi:10.5194/tc-10-535-2016.
NO	HELLSTUGUBREEN	300	20000822	20090621	2.799		-4543		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
NO	HELLSTUGUBREEN	300	19970808	20091017	2.903	-147	-8757		Liss M. Andreassen	Andreassen et al., 2016, The Cryosphere, 10, 535-552, doi:10.5194/tc-10-535-2016.
NO	HELLSTUGUBREEN	300	20030301	20160608	2.799		-7787		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
NO	HELLSTUGUBREEN	300	20030420	20160608	2.799		-6110		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.

PU	GLACIER_NAME	WGMS_ID	FROM	TO	AREA	AREA_CHG	THICKNESS_CHG	VOLUME_CHG	INVESTIGATORS_(SPONS_AGENCY)	REFERENCES
NO	HELLSTUGUBREEN	300	20090621	20170720	2.799		-4955		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
NO	HELLSTUGUBREEN	300	20000822	20170720	2.799		-11784		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
NO	LANGFJORDJOEKELEN	323	19660701	19940801	3.7	-600	-23330			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Andre-assen, L.M., et al., 2012, J. Glaciol., 58, 581-593, 10.3189/2012JoG11J014
NO	LANGFJORDJOEKELEN	323	19660701	19940801	4.7	-800	-8720			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Andre-assen, L.M., et al., 2012, J. Glaciol., 58, 581-593, 10.3189/2012JoG11J014
NO	LANGFJORDJOEKELEN	323	19940801	20080902	3.21	-410	-21000		Liss M. Andreassen & Bjarne Kjøllmoen	Andreassen et al., 2016, The Cryosphere, 10, 535-552, doi:10.5194/tc-10-535-2016.
NO	LANGFJORDJOEKELEN	323	20040508	20120917	3.455		-11331		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
NO	LANGFJORDJOEKELEN	323	20040508	20130302	3.455		-7250		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
NO	LANGFJORDJOEKELEN	323	20040508	20150822	3.455		-12318		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
NO	LANGFJORDJOEKELEN	323	20040508	20150522	3.455		-10575		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
NO	LANGFJORDJOEKELEN	323	20040508	20160630	3.455		-10054		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
NO	LANGFJORDJOEKELEN	323	20040508	20170624	3.455		-13858		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
NO	NIGARDSBREEN	290	19640902	19840810	48.86	550	3650		Bjarne Kjøllmoen	Andreassen et al., 2016, The Cryosphere, 10, 535-552, doi:10.5194/tc-10-535-2016.
NO	NIGARDSBREEN	290	19840810	20130910	46.61	-2250	-5754		Bjarne Kjøllmoen & Liss M. Andreassen	Andreassen et al., 2016, The Cryosphere, 10, 535-552, doi:10.5194/tc-10-535-2016.
NO	NIGARDSBREEN	290	20040303	20130927	41.872		-7298		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
NO	NIGARDSBREEN	290	20040810	20130927	41.872		-8381		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
NO	NIGARDSBREEN	290	20040303	20140914	41.872		-3940		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
NO	NIGARDSBREEN	290	20040810	20140914	41.872		-5273		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
NO	NIGARDSBREEN	290	20040303	20161005	41.872		-4968		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
NO	NIGARDSBREEN	290	20040810	20161005	41.872		-6310		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
NO	NIGARDSBREEN	290	20070328	20161005	41.872		-7308		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
NO	REMBESDALSKAAKA	2296	19610831	19950831	17.638	21	7180		Hallgeir Elvehøy & Liss M. Andreassen	Andreassen et al., 2016, The Cryosphere, 10, 535-552, doi:10.5194/tc-10-535-2016.
NO	REMBESDALSKAAKA	2296	19950831	20100930	17.264	-374	-13040		Hallgeir Elvehøy & Liss M. Andreassen	Andreassen et al., 2016, The Cryosphere, 10, 535-552, doi:10.5194/tc-10-535-2016.
NO	RUNDVASSBREEN	2670	20010820	20130908	11.123		-9242		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
NO	STORBREEN	302	19409999	19519999	5.73	-210	-6000			Andreassen, L.M., 1999, Geogr. Ann., 81A, 467-476, 10.1111/j.0435-3676.1999.00076.x
NO	STORBREEN	302	19519999	19689999	5.6	-130	-1667			Andreassen, L.M., 1999, Geogr. Ann., 81A, 467-476, 10.1111/j.0435-3676.1999.00076.x
NO	STORBREEN	302	19689999	19849999	5.35	-250	-7111			Andreassen, L.M., 1999, Geogr. Ann., 81A, 467-476, 10.1111/j.0435-3676.1999.00076.x
NO	STORBREEN	302	19680827	19840824	5.347	-256	-6028		Liss M. Andreassen	Andreassen et al., 2016, The Cryosphere, 10, 535-552, doi:10.5194/tc-10-535-2016.
NO	STORBREEN	302	19840824	19970808	5.355	9	3839		Liss M. Andreassen	Andreassen et al., 2016, The Cryosphere, 10, 535-552, doi:10.5194/tc-10-535-2016.
NO	STORBREEN	302	19970808	20091017	5.14	-215	-7936		Liss M. Andreassen	Andreassen et al., 2016, The Cryosphere, 10, 535-552, doi:10.5194/tc-10-535-2016.
NO	STORBREEN	302	20000822	20140916	5.21		-14660		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
NO	STORBREEN	302	20030301	20150929	5.21		-10790		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
NO	STORBREEN	302	20030420	20150929	5.21		-9737		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
NO	STORBREEN	302	20000822	20161005	5.21		-12657		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
NO	STORBREEN	302	20000822	20160919	5.21		-15467		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
NO	STORBREEN	302	20070328	20161005	5.21		-7092		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
NO	STORBREEN	302	20070328	20160919	5.21		-11018		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
NO	STORBREEN	302	20000822	20170720	5.21		-10640		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
NO	STORBREEN	302	20090621	20170720	5.21		-4578		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
NO	STORBREEN	302	20070328	20170722	5.21		-4130		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
NO	STORBREEN	302	20000822	20170722	5.21		-10287		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
NP - Nepal										
NP	MERA	3996	20000299	20110104	1.436		2219			Gardelle, J., et al., 2013, Cryosphere, 7, 1263-1286, 10.5194/tc-7-1263-2013
NP	RIKHA SAMBA	1516	19749999	19949999	4.62		-629			Fujita, K., and T. Nuimura, 2011, Proc. Natl. Acad. Sci. U.S.A., 108, 14011-14014, 10.1073/pnas.1106242108
NP	RIKHA SAMBA	1516	19991099	20100599	4.62		-4790		Koji Fujita	Fujita, K., and T. Nuimura, 2011, Proc. Natl. Acad. Sci. U.S.A., 108, 14011-14014, 10.1073/pnas.1106242108
NP	RIKHA SAMBA	1516	20009999	20169999			-7017		Fanny Brun	Brun et al. (2017); Nature Geoscience, 10(9), 668-673, 10.1038/NGEO2999.

PU	GLACIER_NAME	WGMS_ID	FROM	TO	AREA	AREA_CHG	THICKNESS_CHG	VOLUME_CHG	INVESTIGATORS_(SPONS_AGENCY)	REFERENCES
NP	WEST CHANGRI NUP	10401	20000299	20110104	12.451		-6998			Gardelle, J., et al., 2013, Cryosphere, 7, 1263-1286, 10.5194/tc-7-1263-2013
NP	WEST CHANGRI NUP	10401	20091028	20151122	0.89	-70	-7910			Sherpa et al. (2017, subm.), J. Glaciol.
NP	WEST CHANGRI NUP	10401	20009999	20169999			-8826		Fanny Brun	Brun et al. (2017); Nature Geoscience, 10(9), 668-673, 10.1038/NGEO2999.
NP	YALA	912	19829999	19949999			-3720		K. Fujita	WGMS (2005): FoG 1995-2000 (Vol. VIII).
NP	YALA	912	19821099	19961099	1.88		-754			Fujita, K., and T. Nuimura, 2011, Proc. Natl. Acad. Sci. U.S.A., 108, 14011-14014, 10.1073/pnas.1106242108
NP	YALA	912	19961099	20091199	1.88		-10400		Koji Fujita	WGMS (2012): FoG 2005-2010 (Vol. X).
NP	YALA	912	20000299	20120115	1.61	-17	-10490		Sharad Joshi	WGMS (2015): GGCB No. 1 (2012-2013).
NP	YALA	912	20009999	20169999			-8290		Fanny Brun	Brun et al. (2017); Nature Geoscience, 10(9), 668-673, 10.1038/NGEO2999.
NZ - New Zealand										
NZ	BREWSTER	1597	20001216	20090321	2.673		-11391		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
NZ	BREWSTER	1597	20020403	20121210	2.673		7175		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
PE - Peru										
PE	YANAMAREY	226	18509999	19489999	1.1	-600		-35000		Hastenrath, S., and A. Ames, 1995, J. Glaciol., 41, 191-196, 10.3198/1995JoG41-137-191-196
PE	YANAMAREY	226	19489999	19829999	1	-100		-22000		Hastenrath, S., and A. Ames, 1995, J. Glaciol., 41, 191-196, 10.3198/1995JoG41-137-191-196
PE	YANAMAREY	226	19829999	19889999	0.8	-200		-7000		Hastenrath, S., and A. Ames, 1995, J. Glaciol., 41, 191-196, 10.3198/1995JoG41-137-191-196
RU - Russia										
RU	DJANKUAT	726	19689999	19749999	2.876	-114	-1900	-5648		Popovnin, V.V., and D.A. Petrakov, 2005, Mater. Glyatsol. Issled., 98, 167-174
RU	DJANKUAT	726	19749999	19849999	3.126	250	-900	-2645		Popovnin, V.V., and D.A. Petrakov, 2005, Mater. Glyatsol. Issled., 98, 167-174
RU	DJANKUAT	726	19849999	19929999	2.876	-26	-511	-1592		Popovnin, V.V., and D.A. Petrakov, 2005, Mater. Glyatsol. Issled., 98, 167-174
RU	DJANKUAT	726	19929999	19969999	3.1	-243	-1273	-3793	A.A. Aleynikov and V.V. Popovnin	WGMS (2005): FoG 1995-2000 (Vol. VIII).
RU	DJANKUAT	726	19969999	19989999	2.857		-1753	-5007	A.A. Aleynikov and V.V. Popovnin	WGMS (2005): FoG 1995-2000 (Vol. VIII).
RU	DJANKUAT	726	19920701	19990701	2.734	-370	-2770			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Popovnin, V.V., and D.A. Petrakov, 2005, Mater. Glyat-sol. Issled., 98, 167-174
RU	DJANKUAT	726	19989999	19999999	2.857	-120	-667	-1863	A.A. Aleynikov and V.V. Popovnin	WGMS (2005): FoG 1995-2000 (Vol. VIII).
RU	DJANKUAT	726	20010915	20120906	2.233		-6148		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
RU	DJANKUAT	726	20050412	20130605	2.233		-10212		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
RU	DJANKUAT	726	20010915	20130815	2.233		-5095		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
RU	DJANKUAT	726	20050428	20130605	2.233		-5821		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
RU	DJANKUAT	726	20050428	20130815	2.233		-9778		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
RU	DJANKUAT	726	20050521	20130527	2.233		-16338		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
RU	DJANKUAT	726	20020411	20130815	2.233		-5376		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
RU	DJANKUAT	726	20050521	20130815	2.233		-17118		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
RU	DJANKUAT	726	20050521	20130605	2.233		-12428		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
RU	DJANKUAT	726	20050412	20130815	2.233		-13063		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
RU	DJANKUAT	726	20010915	20170904	2.233		-10585		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
RU	DJANKUAT	726	20081013	20170904	2.233		-11288		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
RU	DJANKUAT	726	20080614	20170803	2.233		-14540		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
RU	DJANKUAT	726	20050428	20170810	2.233		-15463		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
RU	DJANKUAT	726	20080614	20170810	2.233		-15638		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
RU	DJANKUAT	726	20010915	20170810	2.233		-7338		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
RU	DJANKUAT	726	20061109	20170810	2.233		-14019		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
RU	DJANKUAT	726	20080614	20170904	2.233		-18741		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
RU	DJANKUAT	726	20090804	20170810	2.233		-7885		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
RU	DJANKUAT	726	20061109	20170904	2.233		-17843		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
RU	DJANKUAT	726	20010915	20170803	2.233		-7339		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
RU	DJANKUAT	726	20050521	20170803	2.233		-19073		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
RU	DJANKUAT	726	20050521	20170810	2.233		-19738		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
RU	DJANKUAT	726	20050412	20170810	2.233		-19379		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
RU	DJANKUAT	726	20090804	20170904	2.233		-11785		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
RU	DJANKUAT	726	20061109	20170803	2.233		-16196		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
RU	DJANKUAT	726	20011026	20170810	2.233		-7511		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.

PU	GLACIER_NAME	WGMS_ID	FROM	TO	AREA	AREA_CHG	THICKNESS_CHG	VOLUME_CHG	INVESTIGATORS_(SPONS_AGENCY)	REFERENCES
RU	DJANKUAT	726	20050521	20170904	2.233		-23641		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
RU	DJANKUAT	726	20081013	20170803	2.233		-7751		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
RU	DJANKUAT	726	20020411	20170810	2.233		-8604		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
RU	GARABASHI	761	20001115	20100807	2.333		4808		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
RU	GARABASHI	761	20011026	20100807	2.333		4470		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
RU	GARABASHI	761	20010915	20110810	2.333		-4594		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
RU	GARABASHI	761	20010915	20170803	2.333		-12544		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
RU	GARABASHI	761	20010915	20170904	2.333		-13569		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
RU	GARABASHI	761	20061109	20170803	2.333		-7389		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
RU	GARABASHI	761	20001115	20170904	2.333		-8015		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
RU	GARABASHI	761	20061109	20170904	2.333		-8532		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SE - Sweden										
SE	MARMAGLACIAEREN	1461	20020528	20140725	3.689		-15011		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SE	RABOTS GLACIAER	334	19109999	19599999	4.12	-450	-16300	-77300		Brugger, K.A., et al., 2005, Ann. Glaciol., 42, 180-188, 10.3189/172756405781813014
SE	RABOTS GLACIAER	334	19599999	19809999	3.82	-300	-12400	-51100		Brugger, K.A., et al., 2005, Ann. Glaciol., 42, 180-188, 10.3189/172756405781813014
SE	RABOTS GLACIAER	334	19809999	19899999	3.75	-70	-2700	-10400		Brugger, K.A., et al., 2005, Ann. Glaciol., 42, 180-188, 10.3189/172756405781813014
SE	RABOTS GLACIAER	334	19899999	20039999	3.69	-60	-3900	-14400		Brugger, K.A., et al., 2005, Ann. Glaciol., 42, 180-188, 10.3189/172756405781813014
SE	RABOTS GLACIAER	334	20039999	20119999	3.43	-260	-7000	-27600		Brugger and Pankratz (2015), Geografiska Annaler 97, 265–278, doi: 10.1111/geoa.12062.
SE	RIUKOJIETNA	342	20010820	20131022	4.886		-10086		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SE	RIUKOJIETNA	342	20010820	20140821	4.886		-10598		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SE	RIUKOJIETNA	342	20010820	20140725	4.886		-9300		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SE	RIUKOJIETNA	342	20020528	20140725	4.886		-4796		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SE	RIUKOJIETNA	342	20030618	20140725	4.886		-6543		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SE	RIUKOJIETNA	342	20020528	20160923	4.886		-8272		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SE	RIUKOJIETNA	342	20030618	20160923	4.886		-10366		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SE	STORGLACIAEREN	332	19499999	19599999				9500		Holmlund, P., 1987, Geogr. Ann., 69A, 439-447, 10.2307/521357
SE	STORGLACIAEREN	332	19499999	19599999				-16500		Holmlund, P., 1987, Geogr. Ann., 69A, 439-447, 10.2307/521357
SE	STORGLACIAEREN	332	19599999	19699999				-11210		Holmlund, P., 1987, Geogr. Ann., 69A, 439-447, 10.2307/521357
SE	STORGLACIAEREN	332	19599999	19699999				-15500		Holmlund, P., 1987, Geogr. Ann., 69A, 439-447, 10.2307/521357
SE	STORGLACIAEREN	332	19599999	19699999				-7700		Holmlund, P., 1996, Geogr. Ann., 78A, 193-196, 10.2307/520981; Albrecht, O., et al., 2000, Ann. Glaciol., 31, 91-96, 10.3189/172756400781819996
SE	STORGLACIAEREN	332	19590923	19690914	3.265	0	-4572	-15227		Koblet, T., et al., 2010, Cryosphere, 4, 333-343, 10.5194/tc-4-333-2010
SE	STORGLACIAEREN	332	19699999	19809999				-8600		Holmlund, P., 1987, Geogr. Ann., 69A, 439-447, 10.2307/521357
SE	STORGLACIAEREN	332	19690914	19800818	3.233	0	-3303	-10784		Koblet, T., et al., 2010, Cryosphere, 4, 333-343, 10.5194/tc-4-333-2010
SE	STORGLACIAEREN	332	19699999	19809999				-22970		Holmlund, P., 1996, Geogr. Ann., 78A, 193-196, 10.2307/520981; Albrecht, O., et al., 2000, Ann. Glaciol., 31, 91-96, 10.3189/172756400781819996
SE	STORGLACIAEREN	332	19699999	19809999				-10990		Holmlund, P., 1987, Geogr. Ann., 69A, 439-447, 10.2307/521357
SE	STORGLACIAEREN	332	19800818	19900904	3.22	0	1510	4883		Koblet, T., et al., 2010, Cryosphere, 4, 333-343, 10.5194/tc-4-333-2010
SE	STORGLACIAEREN	332	19809999	19909999				18110		Holmlund, P., 1996, Geogr. Ann., 78A, 193-196, 10.2307/520981; Albrecht, O., et al., 2000, Ann. Glaciol., 31, 91-96, 10.3189/172756400781819996
SE	STORGLACIAEREN	332	19900904	19990909	3.308	0	677	2181		Koblet, T., et al., 2010, Cryosphere, 4, 333-343, 10.5194/tc-4-333-2010
SE	STORGLACIAEREN	332	20020528	20140725	3.405		-9062		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SE	STORGLACIAEREN	332	20040508	20140808	3.405		-11752		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SJ - Svalbard (Norway)										
SJ	AUSTRE BROEGGERBREEN	292	19779999	19859999	11.8		-5200			Janja, J., and J.O. Hagen, 1996, Mass Balance of Arctic Glaciers (TechReport)
SJ	AUSTRE BROEGGERBREEN	292	20010626	20120716	9.801		-3944		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SJ	AUSTRE BROEGGERBREEN	292	20010626	20130719	9.801		-6143		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SJ	AUSTRE BROEGGERBREEN	292	20050504	20130719	9.801		-8859		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SJ	AUSTRE BROEGGERBREEN	292	20020712	20130526	9.801		-8283		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.

PU	GLACIER_NAME	WGMS_ID	FROM	TO	AREA	AREA_CHG	THICKNESS_CHG	VOLUME_CHG	INVESTIGATORS_(SPONS_AGENCY)	REFERENCES
SJ	AUSTRE BROEGGERBREEN	292	20010714	20140502	9.801		-8602		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SJ	AUSTRE BROEGGERBREEN	292	20010626	20140708	9.801		-5899		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SJ	AUSTRE BROEGGERBREEN	292	20010626	20140518	9.801		-8261		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SJ	AUSTRE BROEGGERBREEN	292	20050504	20140502	9.801		-10880		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SJ	AUSTRE BROEGGERBREEN	292	20050504	20140518	9.801		-9327		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SJ	AUSTRE BROEGGERBREEN	292	20020712	20140502	9.801		-10542		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SJ	AUSTRE BROEGGERBREEN	292	20050504	20140708	9.801		-7766		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SJ	AUSTRE BROEGGERBREEN	292	20050504	20150707	9.801		-10522		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SJ	AUSTRE BROEGGERBREEN	292	20020712	20150813	9.801		-10383		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SJ	AUSTRE BROEGGERBREEN	292	20020712	20150715	9.801		-10248		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SJ	AUSTRE BROEGGERBREEN	292	20020712	20150705	9.801		-9588		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SJ	AUSTRE BROEGGERBREEN	292	20050504	20150705	9.801		-7827		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SJ	AUSTRE BROEGGERBREEN	292	20050504	20150630	9.801		-9693		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SJ	AUSTRE BROEGGERBREEN	292	20010714	20150630	9.801		-8144		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SJ	AUSTRE BROEGGERBREEN	292	20050504	20150703	9.801		-9372		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SJ	AUSTRE BROEGGERBREEN	292	20050504	20150813	9.801		-9856		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SJ	AUSTRE BROEGGERBREEN	292	20020712	20160702	9.801		-7827		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SJ	AUSTRE LOVENBREEN	3812	20020712	20100803	5.017		-3940		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SJ	AUSTRE LOVENBREEN	3812	20050504	20130719	5.017		-6902		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SJ	AUSTRE LOVENBREEN	3812	20050504	20140708	5.017		-4531		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SJ	AUSTRE LOVENBREEN	3812	20020712	20140502	5.017		-9753		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SJ	AUSTRE LOVENBREEN	3812	20020712	20150813	5.017		-7820		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SJ	AUSTRE LOVENBREEN	3812	20020712	20160702	5.017		-6225		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SJ	HANSBREEN	306	19900812	20000401			-9600		Jacek Jania, Leszek Kolondra, Mariusz Grabiec	WGMS (2008): FoG 2000-2005 (Vol. IX).
SJ	HANSBREEN	306	20000401	20050401			-7000		Jacek Jania, Leszek Kolondra, Mariusz Grabiec	WGMS (2008): FoG 2000-2005 (Vol. IX).
SJ	IRENEBREEN	2669	20010626	20130719	3.588		-17222		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SJ	IRENEBREEN	2669	20010529	20130915	3.588		-10509		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SJ	IRENEBREEN	2669	20050504	20130915	3.588		-16742		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SJ	IRENEBREEN	2669	20010626	20130915	3.588		-15268		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SJ	IRENEBREEN	2669	20010529	20130719	3.588		-14150		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SJ	IRENEBREEN	2669	20010626	20140518	3.588		-15136		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SJ	IRENEBREEN	2669	20010529	20140518	3.588		-11083		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SJ	IRENEBREEN	2669	20010529	20140510	3.588		-9755		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SJ	IRENEBREEN	2669	20000817	20140510	3.588		-12938		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SJ	IRENEBREEN	2669	20010626	20140708	3.588		-4289		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SJ	IRENEBREEN	2669	20010626	20140510	3.588		-14525		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SJ	IRENEBREEN	2669	20050504	20140518	3.588		-15980		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SJ	IRENEBREEN	2669	20050504	20140510	3.588		-15261		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SJ	IRENEBREEN	2669	20050504	20140708	3.588		-7954		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SJ	IRENEBREEN	2669	20010529	20150901	3.588		-12456		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SJ	IRENEBREEN	2669	20010529	20150715	3.588		-10046		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SJ	IRENEBREEN	2669	20010626	20150901	3.588		-16410		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SJ	IRENEBREEN	2669	20020712	20150715	3.588		-15205		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SJ	IRENEBREEN	2669	20010626	20150319	3.588		-14841		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SJ	IRENEBREEN	2669	20010626	20150703	3.588		-14443		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SJ	IRENEBREEN	2669	20020712	20150709	3.588		-14411		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SJ	IRENEBREEN	2669	20050504	20150709	3.588		-17528		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SJ	IRENEBREEN	2669	20010529	20150709	3.588		-10406		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SJ	IRENEBREEN	2669	20010529	20150703	3.588		-10861		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.

PU	GLACIER_NAME	WGMS_ID	FROM	TO	AREA	AREA_CHG	THICKNESS_CHG	VOLUME_CHG	INVESTIGATORS_(SPONS_AGENCY)	REFERENCES
SJ	IRENEBREEN	2669	20050504	20150901	3.588		-18811		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SJ	IRENEBREEN	2669	20000817	20150703	3.588		-13472		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SJ	IRENEBREEN	2669	20060720	20150703	3.588		-9693		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SJ	IRENEBREEN	2669	20010626	20150709	3.588		-13704		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SJ	IRENEBREEN	2669	20010529	20150319	3.588		-10627		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SJ	IRENEBREEN	2669	20020712	20150319	3.588		-14378		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SJ	IRENEBREEN	2669	20070901	20150901	3.588		-6288		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SJ	IRENEBREEN	2669	20040719	20150709	3.588		-13391		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SJ	IRENEBREEN	2669	20020712	20150630	3.588		-13517		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SJ	IRENEBREEN	2669	20020712	20160702	3.588		-7935		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SJ	IRENEBREEN	2669	20060720	20160810	3.588		-10698		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SJ	IRENEBREEN	2669	20010529	20160810	3.588		-12856		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SJ	IRENEBREEN	2669	20040719	20160706	3.588		-7417		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SJ	IRENEBREEN	2669	20060720	20170731	3.588		-10977		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SJ	IRENEBREEN	2669	20000817	20170731	3.588		-14974		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SJ	KONGSVEGEN	1456	19969999	20029999			-1740			Bamber, J. L., et al., 2005, Ann. Glaciol., 42, 202-208
SJ	KONGSVEGEN	1456	19669999	20059999	180			-1560000		Nuth, C., et al., 2010, J. Geophys. Res., 115, F01008, 10.1029/2008JF001223
SJ	KRONEBREEN	3504	19669999	20059999	370			-7020000		Nuth, C., et al., 2010, J. Geophys. Res., 115, F01008, 10.1029/2008JF001223
SJ	MIDTRE LOVENBREEN	291	19360701	19620701	5.2	0	-3900			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Kohler, J., et al., 2007, Geophys. Res. Lett., 34, L18502, 10.1029/2007GL030681
SJ	MIDTRE LOVENBREEN	291	19620701	19690701	5.2	0	-1400			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Kohler, J., et al., 2007, Geophys. Res. Lett., 34, L18502, 10.1029/2007GL030681
SJ	MIDTRE LOVENBREEN	291	19690701	19770701	5.2	0	-2460			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Kohler, J., et al., 2007, Geophys. Res. Lett., 34, L18502, 10.1029/2007GL030681
SJ	MIDTRE LOVENBREEN	291	19660728	19770815			-4434	-26600		Barrand, N.E., et al., 2010, J. Glaciol., 56, 771-780, 10.3189/002214310794457362
SJ	MIDTRE LOVENBREEN	291	19770815	19900815			-4815	-26800		Barrand, N.E., et al., 2010, J. Glaciol., 56, 771-780, 10.3189/002214310794457362
SJ	MIDTRE LOVENBREEN	291	19770701	19950701	5.2	0	-6260			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Kohler, J., et al., 2007, Geophys. Res. Lett., 34, L18502, 10.1029/2007GL030681
SJ	MIDTRE LOVENBREEN	291	19950701	20030701	5.2	0	-4160			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Kohler, J., et al., 2007, Geophys. Res. Lett., 34, L18502, 10.1029/2007GL030681
SJ	MIDTRE LOVENBREEN	291	20030701	20050701	5.2	0	-1380			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Kohler, J., et al., 2007, Geophys. Res. Lett., 34, L18502, 10.1029/2007GL030681
SJ	MIDTRE LOVENBREEN	291	20030809	20050705			-980	-4720		Barrand, N.E., et al., 2010, J. Glaciol., 56, 771-780, 10.3189/002214310794457362
SJ	MIDTRE LOVENBREEN	291	19900815	20050705	5.1		-8333	-43100		Barrand, N.E., et al., 2010, J. Glaciol., 56, 771-780, 10.3189/002214310794457362
SJ	MIDTRE LOVENBREEN	291	20020712	20100803	5.202		-2086		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SJ	MIDTRE LOVENBREEN	291	20020712	20140502	5.202		-9671		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SJ	MIDTRE LOVENBREEN	291	20020712	20150715	5.202		-9153		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SJ	MIDTRE LOVENBREEN	291	20020712	20150813	5.202		-9602		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SJ	MIDTRE LOVENBREEN	291	20020712	20160702	5.202		-7502		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SJ	NORDENSKIOELDBREEN	3479	19370901	19900901	367	-89000	-13980			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744
SJ	NORDENSKIOELDBREEN	3479	19370901	19900901	202	-69000	-20640			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744
SJ	NORDENSKIOELDBREEN	3479	19969999	20029999			-1620			Bamber, J. L., et al., 2005, Ann. Glaciol., 42, 202-208
SJ	WALDEMARBREEN	2307	20010626	20131004	2.863		-17772		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SJ	WALDEMARBREEN	2307	20010626	20130915	2.863		-18433		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SJ	WALDEMARBREEN	2307	20010529	20130915	2.863		-14652		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SJ	WALDEMARBREEN	2307	20010626	20130719	2.863		-19787		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SJ	WALDEMARBREEN	2307	20010529	20130719	2.863		-18196		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SJ	WALDEMARBREEN	2307	20050504	20131004	2.863		-16282		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SJ	WALDEMARBREEN	2307	20020712	20131004	2.863		-15990		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.

PU	GLACIER_NAME	WGMS_ID	FROM	TO	AREA	AREA_CHG	THICKNESS_CHG	VOLUME_CHG	INVESTIGATORS_(SPONS_AGENCY)	REFERENCES
SJ	WALDEMARBREEN	2307	20050504	20130915	2.863		-15570		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SJ	WALDEMARBREEN	2307	20050504	20130719	2.863		-22449		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SJ	WALDEMARBREEN	2307	20010529	20140518	2.863		-14854		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SJ	WALDEMARBREEN	2307	20050504	20140708	2.863		-7061		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SJ	WALDEMARBREEN	2307	20010529	20140708	2.863		-5678		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SJ	WALDEMARBREEN	2307	20010626	20140510	2.863		-18080		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SJ	WALDEMARBREEN	2307	20050504	20140518	2.863		-14876		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SJ	WALDEMARBREEN	2307	20010626	20140708	2.863		-9386		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SJ	WALDEMARBREEN	2307	20050504	20140510	2.863		-15412		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SJ	WALDEMARBREEN	2307	20010626	20140518	2.863		-17456		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SJ	WALDEMARBREEN	2307	20000817	20140510	2.863		-13087		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SJ	WALDEMARBREEN	2307	20010529	20140510	2.863		-14768		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SJ	WALDEMARBREEN	2307	20020712	20150709	2.863		-17146		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SJ	WALDEMARBREEN	2307	20010529	20150715	2.863		-14966		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SJ	WALDEMARBREEN	2307	20040719	20150709	2.863		-13249		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SJ	WALDEMARBREEN	2307	20010626	20150901	2.863		-18982		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SJ	WALDEMARBREEN	2307	20020712	20150715	2.863		-16655		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SJ	WALDEMARBREEN	2307	20050504	20150709	2.863		-17863		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SJ	WALDEMARBREEN	2307	20070901	20150901	2.863		-6409		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SJ	WALDEMARBREEN	2307	20010529	20150319	2.863		-14653		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SJ	WALDEMARBREEN	2307	20010626	20150319	2.863		-16565		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SJ	WALDEMARBREEN	2307	20050504	20150901	2.863		-18152		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SJ	WALDEMARBREEN	2307	20010529	20150709	2.863		-15137		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SJ	WALDEMARBREEN	2307	20010626	20150709	2.863		-17418		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SJ	WALDEMARBREEN	2307	20020712	20150319	2.863		-15448		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SJ	WALDEMARBREEN	2307	20010529	20150901	2.863		-16561		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SJ	WALDEMARBREEN	2307	20020712	20150630	2.863		-17002		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SJ	WALDEMARBREEN	2307	20060720	20160810	2.863		-9316		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SJ	WALDEMARBREEN	2307	20010529	20160810	2.863		-16198		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SJ	WALDEMARBREEN	2307	20040719	20160706	2.863		-8810		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SJ	WALDEMARBREEN	2307	20020712	20160702	2.863		-12357		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SJ	WALDEMARBREEN	2307	20000817	20170731	2.863		-15251		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SJ	WALDEMARBREEN	2307	20060720	20170731	2.863		-11633		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SJ	WERENSKIOLDBREEN	305	20030724	20130730	26.682		-6172		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SJ	WERENSKIOLDBREEN	305	20050723	20150730	26.682		-5102		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
SJ	WERENSKIOLDBREEN	305	20060723	20150730	26.682		-5408		Robert McNabb	Zemp et al. (2019): Nature, 568, 382–386, DOI: 10.1038/s41586-019-1071-0.
US - United States of America										
US	BLUE GLACIER	210	19390925	19521003	4.28	-50	-5100			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Conway, H., et al., 1999, Geogr. Ann., 81A, 509-520, 10.1111/j.0435-3676.1999.00080.x
US	BLUE GLACIER	210	19399999	19529999				-31000		Muskett, R.R., et al., 2008, J. Glaciol., 54, 788-300, 10.3189/002214308787779915
US	BLUE GLACIER	210	19529999	19579999				46000		Muskett, R.R., et al., 2008, J. Glaciol., 54, 788-300, 10.3189/002214308787779915
US	BLUE GLACIER	210	19521003	19570911	4.28	0	6200			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Conway, H., et al., 1999, Geogr. Ann., 81A, 509-520, 10.1111/j.0435-3676.1999.00080.x
US	BLUE GLACIER	210	19570911	19870808	4.3	20	1400			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Conway, H., et al., 1999, Geogr. Ann., 81A, 509-520, 10.1111/j.0435-3676.1999.00080.x
US	BLUE GLACIER	210	19579999	19879999				30000		Sapiano, J.J., et al., 1998, J. Glaciol., 44, 119-135, 10.3198/1998JoG44-146-119-135
US	BLUE GLACIER	210	19570911	19870808	5.47	-460	5300			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Sapiano, J.J., et al., 1998, J. Glaciol., 44, 119-135, 10.3198/1998JoG44-146-119-135
US	BLUE GLACIER	210	19579999	19969999				-5000		Sapiano, J.J., et al., 1998, J. Glaciol., 44, 119-135, 10.3198/1998JoG44-146-119-135

PU	GLACIER_NAME	WGMS_ID	FROM	TO	AREA	AREA_CHG	THICKNESS_CHG	VOLUME_CHG	INVESTIGATORS_(SPONS_AGENCY)	REFERENCES
US	BLUE GLACIER	210	19879999	19969999				-24000		Sapiano, J.J., et al., 1998, J. Glaciol., 44, 119-135, 10.3198/1998JoG44-146-119-135
US	BLUE GLACIER	210	19870808	19960620	5.93	460	-4300			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Sapiano, J.J., et al., 1998, J. Glaciol., 44, 119-135, 10.3198/1998JoG44-146-119-135
US	BLUE GLACIER	210	19870808	19960620	4.28	-20	-4110			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Conway, H., et al., 1999, Geogr. Ann., 81A, 509-520, 10.1111/j.0435-3676.1999.00080.x
US	BLUE GLACIER	210	19879999	20099999	5.35	-730		-78000		Riedel et al. (2015), J. Glaciol. 61(225), 8-16.
US	EEL	188	19879999	20099999	0.85	-213		-38000		Riedel, J.L., et al., 2015, J. Glaciol., 61, 8-16, 10.3189/2015JoG14J138
US	GULKANA	90	19540618	19740907	18.4	-1000	-4830			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Echelmeyer, K.A., et al., 1996, J. Glaciol., 42, 538-547, 10.3198/1996JoG42-142-538-547; Cox, L.H., and R.S. March, 2004, J. Glaciol., 50, 363-370, 10.3189/172756504781829855
US	GULKANA	90	19740907	19930711			-6666			Echelmeyer, K.A., et al., 1996, J. Glaciol., 42, 538-547, 10.3198/1996JoG42-142-538-547
US	GULKANA	90	19740907	19930711	17.1	-1300	-4890			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Cox, L.H., and R.S. March, 2004, J. Glaciol., 50, 363-370, 10.3189/172756504781829855
US	GULKANA	90	19540618	19930612	17	-1500	-10900			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Echelmeyer, K.A., et al., 1996, J. Glaciol., 42, 538-547, 10.3198/1996JoG42-142-538-547
US	GULKANA	90	19740920	19930908			-6000		Leif Cox, Rod March	WGMS (2008): FoG 2000-2005 (Vol. IX).
US	GULKANA	90	19540618	19950517			-17767	-13000		Arendt, A., et al., 2009, J. Clim., 22, 4117-4134, 10.1175/2009JCLI2784.1
US	GULKANA	90	19930612	19950517	17	0	-7550			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Arendt, A.A., et al., 2002, Science, 297, 382-386, 10.1126/science.1072497; Echelmeyer, K.A., et al., 1996, J. Glaciol., 42, 538-547, 10.3198/1996JoG42-142-538-547
US	GULKANA	90	19930711	19990818	17.1	0	-6440			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Cox, L.H., and R.S. March, 2004, J. Glaciol., 50, 363-370, 10.3189/172756504781829855
US	GULKANA	90	19950517	20000609	20	0	-3950			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Arendt, A.A., et al., 2002, Science, 297, 382-386, 10.1126/science.1072497
US	LEMON CREEK	3334	19480701	19570918	12.606	-190	-1930			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Marcus, M.G., et al., 1995, Phys. Geogr., 16, 150-161
US	LEMON CREEK	3334	19549999	19899999				-132000		Sapiano, J.J., et al., 1998, J. Glaciol., 44, 119-135, 10.3198/1998JoG44-146-119-135
US	LEMON CREEK	3334	19570918	19890828	11.728	-880	-10800			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Marcus, M.G., et al., 1995, Phys. Geogr., 16, 150-161; Sapiano, J.J., et al., 1998, J. Glaciol., 44, 119-135, 10.3198/1998JoG44-146-119-135
US	LEMON CREEK	3334	19579999	19959999				-164000		Sapiano, J.J., et al., 1998, J. Glaciol., 44, 119-135, 10.3198/1998JoG44-146-119-135
US	LEMON CREEK	3334	19570918	19950531	11.71	-900	-13800			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Sapiano, J.J., et al., 1998, J. Glaciol., 44, 119-135, 10.3198/1998JoG44-146-119-135
US	LEMON CREEK	3334	19480701	19950531			-33944	-11306667		Arendt, A., et al., 2009, J. Clim., 22, 4117-4134, 10.1175/2009JCLI2784.1
US	LEMON CREEK	3334	19899999	19959999				-32000		Miller, M.M., and M.S. Pelto, 1999, Geogr. Ann., 81A, 671-681, 10.1111/j.0435-3676.1999.00095.x
US	LEMON CREEK	3334	19890828	19950531	11.71	-20	-2800			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Marcus, M.G., et al., 1995, Phys. Geogr., 16, 150-161; Sapiano, J.J., et al., 1998, J. Glaciol., 44, 119-135, 10.3198/1998JoG44-146-119-135
US	LEMON CREEK	3334	19950531	19990604	14	0	-5880			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Arendt, A.A., et al., 2002, Science, 297, 382-386, 10.1126/science.1072497
US	SOUTH CASCADE	205	19580821	19610912	2.66	-50	-2850			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Meier, M.F., and W.V. Tangborn, 1965, J. Glaciol., 5, 547-566
US	SOUTH CASCADE	205	19610912	19640911	2.67	-60	-90			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Krimmel, R.M., 1989, in: Glacier Fluctuations and Climatic Change, 193-206, Dordrecht
US	SOUTH CASCADE	205	19640911	19700909	2.63	-40	-5510			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Krimmel, R.M., 1989, in: Glacier Fluctuations and Climatic Change, 193-206, Dordrecht
US	SOUTH CASCADE	205	19700929	19750924	2.58	-50	2770			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Krimmel, R.M., 1999, Geogr. Ann., 81A, 653-658, 10.1111/j.0435-3676.1999.00093.x
US	SOUTH CASCADE	205	19709999	19769999	2.72		3665			PSFG (1985): FoG 1975-1980 (Vol. IV).
US	SOUTH CASCADE	205	19750924	19770913	2.57	-10	-1870			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Krimmel, R.M., 1999, Geogr. Ann., 81A, 653-658, 10.1111/j.0435-3676.1999.00093.x

PU	GLACIER_NAME	WGMS_ID	FROM	TO	AREA	AREA_CHG	THICKNESS_CHG	VOLUME_CHG	INVESTIGATORS_(SPONS_AGENCY)	REFERENCES
US	SOUTH CASCADE	205	19770913	19791010	2.56	-10	-1680			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Krimmel, R.M., 1999, Geogr. Ann., 81A, 653-658, 10.1111/j.0435-3676.1999.00093.x
US	SOUTH CASCADE	205	19791010	19801003	2.55	-10	-2070			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Krimmel, R.M., 1999, Geogr. Ann., 81A, 653-658, 10.1111/j.0435-3676.1999.00093.x
US	SOUTH CASCADE	205	19801003	19850924	2.52	-30	-6680			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Krimmel, R.M., 1999, Geogr. Ann., 81A, 653-658, 10.1111/j.0435-3676.1999.00093.x
US	SOUTH CASCADE	205	19850924	19860905	2.51	-10	-640			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Krimmel, R.M., 1999, Geogr. Ann., 81A, 653-658, 10.1111/j.0435-3676.1999.00093.x
US	SOUTH CASCADE	205	19860905	19870909	2.51	0	-1970			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Krimmel, R.M., 1999, Geogr. Ann., 81A, 653-658, 10.1111/j.0435-3676.1999.00093.x
US	SOUTH CASCADE	205	19870909	19880821	2.5	-10	-1350			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Krimmel, R.M., 1999, Geogr. Ann., 81A, 653-658, 10.1111/j.0435-3676.1999.00093.x
US	SOUTH CASCADE	205	19880821	19890912	2.5	0	-1210			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Krimmel, R.M., 1999, Geogr. Ann., 81A, 653-658, 10.1111/j.0435-3676.1999.00093.x
US	SOUTH CASCADE	205	19890912	19900905	2.1	-400	-1320			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Krimmel, R.M., 1999, Geogr. Ann., 81A, 653-658, 10.1111/j.0435-3676.1999.00093.x
US	SOUTH CASCADE	205	19900905	19910909	2.1	0	-1220			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Krimmel, R.M., 1999, Geogr. Ann., 81A, 653-658, 10.1111/j.0435-3676.1999.00093.x
US	SOUTH CASCADE	205	19910909	19921006	2.09	0	-2430			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Krimmel, R.M., 1999, Geogr. Ann., 81A, 653-658, 10.1111/j.0435-3676.1999.00093.x
US	SOUTH CASCADE	205	19921006	19930901	2.08	-10	-1340			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Krimmel, R.M., 1999, Geogr. Ann., 81A, 653-658, 10.1111/j.0435-3676.1999.00093.x
US	SOUTH CASCADE	205	19930901	19940906	2.05	-30	-1460			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Krimmel, R.M., 1999, Geogr. Ann., 81A, 653-658, 10.1111/j.0435-3676.1999.00093.x
US	SOUTH CASCADE	205	19940906	19950912	2.03	-20	-900			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Krimmel, R.M., 1999, Geogr. Ann., 81A, 653-658, 10.1111/j.0435-3676.1999.00093.x
US	SOUTH CASCADE	205	19950912	19960910	2.03	0	-620			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Krimmel, R.M., 1999, Geogr. Ann., 81A, 653-658, 10.1111/j.0435-3676.1999.00093.x
US	TAKU	124	19480701	19930701			32000	-12667		Arendt, A., et al., 2009, J. Clim., 22, 4117-4134, 10.1175/2009JCLI2784.1
US	TAKU	124	19930701	19990701	816	0	-7740			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Arendt, A.A., et al., 2002, Science, 297, 382-386, 10.1126/science.1072497
US	TAKU	124	19480701	20000210	756.905	0	21840			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Larsen, C.F., et al., 2007, J. Geophys. Res., 112, F01007, 10.1029/2006JF000586
US	WOLVERINE	94	19749999	19859999	17.24		4060	69900		WGMS (1993): FoG 1985-1990 (Vol. VI).
US	WOLVERINE	94	19740311	19850612	18.1	0	1830			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Trabant, D.C., and R.S. March, 1999, Geogr. Ann., 81A, 777-789, 10.1111/j.0435-3676.1999.00105.x
US	WOLVERINE	94	19500701	19940527			-23467	-126667		Arendt, A., et al., 2009, J. Clim., 22, 4117-4134, 10.1175/2009JCLI2784.1
US	WOLVERINE	94	19940527	19990513	19	0	-5150			Cogley, G., 2009, Ann. Glaciol., 50, 96-100, 10.3189/172756409787769744; Arendt, A.A., et al., 2002, Science, 297, 382-386, 10.1126/science.1072497